Commonwealth of Pennsylvania

DEPARTMENT OF AGRICULTURE

BULLETIN No. 185

TABULATED ANALYSES OF

COMMERCIAL FERTILIZERS

FROM SAMPLES SELECTED IN ACCORDANCE
WITH ACT OF MARCH 25, 1901

BY THE PENNSYLVANIA DEPARTMENT
OF AGRICULTURE

FROM JANUARY 1 TO AUGUST 1, 1909

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The Act of Ist May, 1909, Commonly Referred to as "The New Fertilizer Law" is as Follows:

No. 205.

AN ACT.

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Commercial fertilizers

Manufacture and sale of.

Section 1. Be it enacted, &c., That every package of commercial fertilizer sold, offered, or exposed for sale, for manurial purposes within this Commonwealth, except the dung of domestic animals, lime, marl, and wood-ashes, shall have plainly stamped thereon the name and address of the manufacturer or importer and his place of business, the net weight of the contents of the package, the brand or trade-name of the fertilizer the package contains, and an analysis stating the percentage such fertilizer contains of nitrogen in an available form, of potash soluble in water, of soluble and reverted phosphoric acid, and of insoluble phosphoric acid.

Filing of statement.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Filing of affidavit.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade name sold within the State during the last preceding year; and if the said amount shall exceed one hundred tons, and be less than five hundred tons, he or they shall pay the sum of twenty dollars, as aforesaid; and if the

Sums to be paid yearly.

said amount shall be five hundred tons or more, he or they shall pay the sum of thirty dollars, as aforesaid. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all monies so received shall be immediately paid by the Secretary of Agriculture into the State Treasury, for the use of the Commonwealth.

Proviso.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot parcel, or package of the same.

Prohibited articles.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid to him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Violations.

Misdemeanor.

Fines.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, of any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the value of said samples.

Samples and analysis.

Inspection.

"Commercial fertilizer" defined.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Act of March 25 1901, cited for repeal.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

No. 95.

AN ACT.

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Commercial fertilizers.

Use of the word "bone."

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Misdemeanor.

Fine.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars, for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Jurisdiction of aldermen and justices of the peace.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23d day of April, A. D., 1909.

EDWIN S. STUART.

LETTER OF TRANSMITTAL.

State College, Pa., August 3, 1909.

Hon. N. B. Critchfield, *Secretary of Agriculture, Harrisburg, Pa.:*

Dear Sir: I have the honor to transmit herewith my report upon the analysis of the samples of commercial fertilizers received from official sampling agents during the spring season of 1909.

Very respectfully,

WM. FREAR.

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FERTILIZER VALUATIONS—1909.

The object of an official valuation of commercial fertilizers is to enable the consumer to judge approximately whether he has been asked to pay for a given brand more than the fertilizing ingredients it contains and market conditions prevailing at the time would warrant. It is clear, therefore, that no attempt is made in this valuation to indicate whether the fertilizer valued possesses a greater or less crop-producing capacity than another fertilizer; but only whether it is higher priced than another of the same general composition.

For this purpose the valuation must be so computed as to include all the elements entering into the cost of a fertilizer as it is delivered to the consumer. These elements may be conveniently grouped as follows:

1. The wholesale cost of the ingredients.

2. The jobbers' gross profit on the sale of the ingredients; this includes office expenses, advertising, losses, etc.; for the purpose of the present computation it may be assumed that the sum of this gross profit and the wholesale cost of the ingredients, is equivalent to the retail price of the single ingredients near the wholesale markets in ton lots of original packages for cash.

3. The expense and profit of mixing: This item applies only to complete fertilizers, rock and potash, and ammoniated rock; not to disolved or ground bone, or to dissolved rock.

4. The expense and profit of bagging.

5. Agents' commission: This item includes not only the commission proper, but every advance in price due to the sale of the goods through an agent in small quantities on time, rather than directly to the consumer in ton lots for cash.

6. Freight from the wholesale market to the point of delivery.

The valuations for 1908 were based:

1. Upon the wholesale prices from September 1, 1907, to March 1, 1908, of the raw materials used in fertilizer manufacture, the quotations of the New York market being adopted for all materials except acidulated phosphate rock and ground bone.

2. Upon an allowance of 20 per cent. of the wholesale prices, above mentioned, to cover jobbers' profit.

By adding the 20 per cent. allowed for jobbers' gross profit to the wholesale price of the several raw materials, the retail price in original packages at the jobbers' warehouse is obtained.

Since the amount of the several valuable fertilizing constituents in the various raw materials is known, it is a simple matter to determine the corresponding retail value per pound of the valuable fertilizing constituents yielded by each raw material. A schedule of these pound values affords a convenient basis of computation of the value per ton of various fertilizers, whose computation is ascertained by analysis.

The values assigned, for the present, to the other elements in the cost of the fertilizer at the point of delivery are:

3. For mixing, $1.00 per ton.

4. For bagging, $1.00 per ton, in all cases except those in which the article was sold in original packages; the cost of the package being, in such cases, included in the wholesale price.

5. For agents' commission, 20 per cent. of the cost of the goods f. o. b. at the jobbers' or mixers' warehouse.

6. For freight, $2.00 per ton; the cost of the freight in lots of twelve tons or over, from the seaboard to Harrisburg, averaging $1.88 per ton.

The following valuation of dissolved South Carolina rock illustrates the method:

Phosphoric acid.	Per cent.	Weight per ton.	
Soluble,	11.50	230 lbs. at 3c.	$6 90
Reverted,	2.50	50 lbs. at 2½c.	1 25
Insoluble,	1.00	20 lbs. at 1½c.	30
Retal cash value of ingredients,			$8 45
Bagging,			1 00
Cash value of goods ready for shipment,			$9 45
Agents' commission, 20 per cent,			1 89
Freight,			2 00
Commercial value per ton,			$13 34

It is not to be expected, of course, that the valuations thus computed will precisely represent the fair price to be charged for a brand in each locality and in every transaction. Market conditions, competition, distance from factory, all introduce minor variations. Nevertheless, to make the approximation reasonably close the average valuation of a given class of goods ought to agree closely with its ascertained average selling price. Whenever such an agreement is no longer obtained by the use of a schedule, it is evident that the schedule of retail values of the constituents, or the added allowances for mixing, etc., requires revision.

It is needful to note here another factor greatly affecting the practical accuracy of these approximations. Their computations would offer little difficulty and their usefulness be far greater, if, by the ordinary methods of analysis, the exact nature of the ingredients used to supply the several fertilizer constituents, were capable of certain determination. This is, however, possible today to only a limited extent. The valuations are therefore based on the assumption that the fertilizers are uniformly compounded from high quality ingredients, such as are commonly employed in the manufacture of fertilizers of the several classes. Consumers should carefully avoid the error of accepting such valuations as infallible; they are not designed to be used for close comparisons of single brands, but only to indicate whether the price asked for a fertilizer is abnormal. assuming good quality for the ingredients used. From this it is clear that, except as high freights may require, the selling price of a brand should not far exceed the valuation; but that a fertilizer may be made of inferior materials and yet have a high valuation.

The valuations used during 1907 were modified for use during 1908 in accordance with the changes in wholesale prices of fertilizing ingredients and to make the valuations more closely follow the selling price.

The following comparative statement shows the valuations and selling prices of the several classes of fertilizers during 1904 to 1908

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1904.				
Complete,	349	25.07	24.28	.79
Rock-and-potash,	75	15.45	16.47	—1.02
Dissolved bone,	2	28.42	31.50	—3.08
Ground bone,	22	27.77	28.20	—.43
Dissolved rock,	41	14.06	14.59	—.53
Fall, 1904.				
Complete,	256	22.53	21.82	.71
Rock-and-potash,	68	14.92	15.89	—.97
Dissolved bone,	6	27.77	24.94	2.83
Ground bone,	38	27.97	27.02	.95
Dissolved rock,	45	14.09	13.89	.20
Spring, 1905.				
Complete,	374	25.60	24.63	.97
Rock-and-potash,	82	15.49	16.11	—.62
Dissolved bone,	3	22.70	23.83	—1.13
Ground bone,	27	26.72	29.08	—2.36
Dissolved rock,	47	13.86	13.64	.22

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Fall, 1905.				
Complete,	285	22.35	21.39	.96
Rock-and-potash,	74	15.04	15.97	—.97
Dissolved bone,	6	25.85	24.78	1.11
Ground bone,	35	28.70	27.70	1.00
Dissolved rock,	49	13.51	14.21	1.30
Spring, 1906.				
Complete,	412	24.76	23.55	1.21
Rock-and-potash,	99	15.19	16.17	—.98
Dissolved bone,	4	22.65	24.40	—1.75
Ground bone,	34	28.23	29.02	—.79
Dissolved rock,	45	12.98	13.75	—.77
Fall, 1906.				
Complete,	266	22.99	21.87	1.12
Rock-and-potash,	71	15.06	15.76	—.70
Dissolved bone,	7	25.33	22.06	3.27
Ground bone,	34	29.12	27.80	1.32
Dissolved rock,	43	12.99	13.45	—.46
Spring, 1907.				
Complete,	424	26.84	24.60	2.24
Rock-and-potash,	103	16.63	16.91	—.31
Dissolved bone,	6	25.08	22.28	2.80
Ground bone,	27	29.64	31.55	—1.91
Dissolved rock,	41	14.72	14.64	.08
Fall, 1907.				
Complete,	280	24.59	22.71	1.88
Rock-and-potash,	96	15.82	16.58	—.76
Dissolved bone,	8	27.61	22.09	5.52
Ground bone,	36	28.80	28.92	.12
Dissolved rock,	48	14.67	14.76	.09
Spring, 1908.				
Complete,	455	26.23	25.69	.54
Rock-and-potash,	108	16.24	16.96	—.62
Dissolved bone,	4	23.09	21.11	1.98
Ground bone,	21	28.96	29.04	—.08
Dissolved rock,	33	14.92	14.72	.20
Fall, 1908.				
Complete,	287	23.88	22.34	1.54
Rock-and-potash,	104	16.17	16.43	—.26
Dissolved bone,	6	26.05	22.48	3.57
Ground bone,	30	27.90	29.18	—1.28
Dissolved rock,	49	14.86	14.31	.55

The following statement from the weekly reports of the Oil, Paint and Drug Reporter, of New York City, shows the average wholesale prices of fertilizer raw materials from September 1, 1907, to March 1, 1908, and from September 1, 1908, to March 1, 1909:

Wholesale Prices of Fertilizer Ingredients, New York, Oil, Paint and Drug Reporter.

Substance.	Amount priced.	Average price Sept. 1, 1907, to March 1, 1908.	Average price Sept. 1, 1908, to March 1, 1909.	Prices Sept.-March, 1908-9, in per cent. of prices 1907-8.
Sulphate of ammonia,	Cwt.,	3.0344	2.8999	95.5
Nitrate of soda,	Cwt.,	2.3882	2.166	90.7
Dried blood, H. G.,	Unite (20 lbs.),	2.4515	2.6587	108.4
Concentrated tankage,	Unit (20 lbs.),	2.357	2.26	95.8
Rough bone,	Ton,	16.94	19.57	115.5
Bone meal,	Ton,	20.94	22.49	107.4
Fish guano dry,	Unit (20 lbs.),	*2.80	*2.772	99.0
Phosphate rock, Charleston,	Ton,	6.875	6.875	100.0
Phosphate rock, Tennessee,	Ton,	6.58	5.67	86.2
Acid phosphate,	Unit (20 lbs),	.7146	.5684	79.5
Double manure salt,	Cwt.,	1.174	1.165	99.0
Sulphate of potash,	Cwt.,	2.2011	2.18	99.0
Kainit,	Ton,	8.95	8.50	95.0
Muriate of potash,	Cwt.,	1.961	1.90	96.9
Sulphuric acid 66 degrees B.,	Cwt.,	1.3896	1.05	75.6

*Bone phosphate of lime 15 cents per unit.

In ammoniates such as dried blood and fish guano, the unit is of ammonia, of which 82.35 per cent. is nitrogen; in acid phosphate, the unit is of phosphoric acid (phosphorous pentoxid.)

There has been a falling off in prices of raw materials all along the line. The only materials which show an increase over last year's prices are dried blood and bone. The reduction in price is especially noticeable in case of acid phosphate.

Phosphates:

During March 1908 prices of phosphates were lowered to a greater or less extent. Prices, which were fairly well maintained throughout the balance of the year, were

Charleston ground rock, $6.75 to $7.00 per short ton; Florida phosphate at $4 @ 4.25; Tennessee phosphate, $5 @ 5.50.

Potash Salts: The reports of the U. S. Bureau of Statistics show the following entries for consumption during the fiscal year 1907 and 1908.

	1907.	1908.
Muriate (pounds),	231,527,378	2?0,949,002
Kieserit, kainit, etc. (tons),	344,005	329,467

Prices for potash salts have remained practically the same as last year, the schedule being as follows:

Muriate, 80 per cent., per 100 pounds,	1.885
Sulphate, 48 per cent., per 100 pounds,	2.17
Double manure salt, 48-53 per cent., per 100 pounds,	1.15
Kainit, 12.4 per cent., actual potash, per ton,	8.25
Manure salt, 20 per cent. potash, per ton,	14.68

Composition of Raw Materials.—In order to form a correct idea of the cost per pound of the fertilizer constituents of these materials, it is needful to determine their composition or, in other words, the quantities of valuable constituents each contains. The following table shows the composition of the raw materials used in the manufacture of fertilizers. No analysis of these materials, with the exception of ground bone and dissolved rock, have been made in Pennsylvania. The figures in the following table include the averages of the results of analyses made in Connecticut, New Jersey and Massachusetts during the past year, except in the case of ground bone and dissolved rock phosphates, where Pennsylvania results alone are included.

Composition of Non-Acidulated Fertilizer Ingredients. (Per Cent.)

	Number of samples analyzed.	Nitrogen.	Potash.	Total phosphoric acid.
Sulphate of ammonia,	4	20.39		
Nitrate of soda,	17	14.48		
Dried blood,	3	10.56		
Ground bone,	51	2.99—		22.68
Tankage,	16	6.12		14.08
Ground fish,	22	8.34		6.79
Cottonseed meal,	173	7.08		
Castor pomace,	17	5.02		
Sulphate of potash, H. G.,	10		49.60	
Muriate of potash,	22		50.67	
Kainit,	3		14.25	
Double sulphate of potash and magnesia	4		27.36	

Composition of Acidulated Fertilizer Ingredients. (Per Cent.)

	Number of samples analyzed.	Total phosphoric acid.	Soluble phosphoric acid.	Reverted phosphoric acid.	Insoluble phosphoric acid.	Nitrogen.
Dissolved bone,	10	12.91	6.28	4.02	2.62	1.67
Dissolved rock phosphate,	82	15.37	9.13	4.73	1.52	-------

Cost per pound of Fertilizer Constituents.—With the composition of these raw materials and their price per ton, hundred weight, or other unit of measure as a basis, the wholesale cost per pound of the valuable constituents can be readily calculated. In many cases the ammoniates are quoted "per unit of ammonia," the term unit being equivalent to per cent.; in goods sold by the ton of 2,000 lbs., the unit is equal to 20 lbs., and 20 lbs. of ammonia contain 16.47 lbs. of nitrogen.

In the case of refuse bone-black, unacidulated, the mean, 28.25 per cent. of phosphoric acid, is assumed to represent the average material on the market.

Phosphate rock is sold by the ton of 2,240 lbs., and on the basis of the bone phosphate of lime it contains, with drawbacks for injurious constituents. Bone-phosphate of lime contains 45.8 per cent. of phosphoric acid; therefore, each per cent. of bone phosphate in a long ton is equivalent to 22.4 lbs., and contains 10.26 lbs. of phosphoric acid.

In the wholesale trade, dried blood, azotine, concentrated tankage and hoof meals are usually sold on the basis of ammonia, disregarding the phosphoric acid present.

Insoluble phosphoric acid in dissolved rock is likewise omitted from consideration, contracts being based solely upon the "available" phosphoric acid; nor in rock phosphates is any claim made for the small quantities of nitrogen and potash they contain, nor in dissolved bone for the potash present.

Under these conditions, the wholesale cost per pound in New York of the valuable constituents of such materials as furnish but a single fertilizing element, these materials being assumed to be in the state of preparation and in the packing in which the manufacturer purchased them, are given in the following table; also a figure representing a fair retail price at the factory, the materials having undergone no change in treatment or packing and the allowance for expenses and profit in retailing being 20 per cent.

Wholesale Cost Per Pound of Fertilizer Constituents. (New York.)

I. Ingredients Supplying One Constituent.

Materials.	Constituent Valued.	Wholesale price, cents.	Wholesale price plus .20 per cent.
Sulphate of ammonia,	Nitrogen,	14.82	17.06
Nitrate of soda,	Nitrogen,	14.96	17.95
Dried blood, H. G.,	Nitrogen,	16.14	19.37
Concentrated tankage,	Nitrogen,	13.72	16.46
Phosphate rock,*			
Tennessee, 78 per cent.,	Phosphoric acid, total,	.709	.85
South Carolina, 60 per cent.,	Phosphoric acid, total,	1.12	1.34
Acid phosphate,	Phosphoric acid, available,	2.842	3.41
Double manure salts,	Potash,	4.43	5.31
Sulphate of potash,	Potash,	4.52	5.42
Muriate of potash,	Potash,	3.73	4.48
Kainit,	Potash,	2.97	3.56

*The prices of phosphate rock are f. o. b. at the respective points of shipment, not New York. The prices for potash are taken from the schedule of the syndicate, and those of the remainder from the Oil Paint and Drug Reporter.

The value for nitrogen is based upon quotations for concentrated tankage as outlined a year ago. This value is $2.674 per unit of ammonia, which is equivalent to $3.25 per unit of nitrogen.

The average composition of the ground bone and bone meal samples analyzed last fall in Pennsylvania was: Phosphoric acid, 22.15 per cent; nitrogen, 3.03 per cent.

The prepared bone contains less fat and moisture, and often less nitrogen than ordinary rough bone, but these differences tend, in a measure, to neutralize each other. Assuming for the rough bone quoted in the New York market the same composition as the bone meal sold in Pennsylvania and for the value of the nitrogen $3.25 per unit, as previously stated, the values per pound of the several constituents would be:

Wholesale cost per Pound of Fertilizer Constituents, New York.

II. Bone.

	Constituent Valued.	Wholesale price, cents.	Wholesale price plus 20 per cent.
Rough bone,	Nitrogen,	16.25	19.50
	Phosphoric acid,	2.194	2.63
Ground bone,	Nitrogen,	18.67	22.40
	Phosphoric acid,	2.52	3.02

Valuation in Neighboring States.

It is desirable, from all points of view, that the schedules of valuation throughout a district in which similar market conditions prevail, should differ as little as possible. It has been our practice in the past, to conform our schedule to that adopted after very careful cooperative study of market conditions for each year, by the New England States and New Jersey, except where the peculiar conditions of our markets have made the valuations diverge too largely from the actual selling prices, as in the case of ground bone and dissolved rock phosphates. The schedules for these States for 1908 and 1909 are as folows:

Trade Values Adopted by the New England States and New Jersey.

	Cents per Pound.		Values in 1909 in per cent. of those in 1908.
	1908.	1909.	
Nitrogen:			
In ammonia salts,	17½	17	97.1
In nitrates,	18½	13½	89.2
In dry and fine ground fish, meat blood and mixed fertilizers,	20½	19	92.7
In fine ground bone and tankage,	20½	19	92.7
In coarse bone and tankage,	15	14	93.3
Phosphoric acid:			
Water soluble,	5.0	4.0	80.0
Citrate soluble,	4½	3½	77.7
In fine bone and tankage,	4.0	3½	87.5
In coarse bone and tankage,	3.0	3.0	100.0
In mixed fertilizers, insoluble,	2.0	2.0	100.0
Potash:			
In forms free from muriate,	5.0	5.0	100.0
As muriate,	4¼	4¼	100.0

The changes for 1909 shown in this schedule show a close similarity to those exhibited by the New York wholesale quotations. The most striking exceptions are those for dried blood and ground bone. In each of these cases, the material forms part of a group for which a valuation is affixed in the schedules, and the price of the most largely sold have governed the rate affixed. It should always be remembered in considering the New England States schedules that current retail quotations are used to check the conclusions formed from the study of wholesale prices.

As in preceeding years, the independent valuations of phosphoric acid from rock sources and of ground bone must be made. New York quotations show a drop of over 20 per cent. in the wholesale price of available phosphoric acid. During the period of September, 1908-February, 1909, as compared with September, 1907-February, 1908,

the retail selling prices show some decrease, but not so markedly as the wholesale quotations. A proportional reduction of the scheduled pound-rate of valuation has therefore been made.

New England schedule classes bone with tankage just as is done in the Pennsylvania schedule. The scheduled rate has been markedly decreased for the nitrogen in this class of materials. This change is fully justified by the wholesale quotations on tankage whereas the bone wholesale quotations show an increase rather than a decrease.

Inasmuch as the commercial samples of this class requiring valuation in Pennsylvania represent almost exclusively ground bone rather than tankage, and inasmuch also as the 1908 pound-rates give valuations materially below the average retail market price of ground bone sampled in the fall of 1908 during the present season, it has been deemed desirable to raise slightly the rate for nitrogen in fine and coarse bone and tankage.

Schedule of Values for Fertilizer Ingredients, 1909.

	Cents per Pound.
Nitrogen:	
In ammonia salts,	17
In nitrates,	16½
In meat, dried blood and mixed fertilizers,	19
In fine ground bone and tankage,	16
In coarse bone and tankage,	14
Phosphoric acid:	
Soluble in water, in bone ftrilizers,	4
Soluble in water, in rock fertilizers,	3½
Soluble in ammonium citrate, in bone fertilizers,	3½
Soluble in ammonium citrate, in rock fertilizers,	2½
Insoluble in ammonium citrate, in bone fertilizers,	2
Insoluble in ammonium citrate, in rock fertilizers,	1½
In fine bone, tankage and fish,	3
In coarse bone and tankage,	2½
In cotton seed meal, caster pomace and wood ashes,	4
Potash:	
In high grade sulphate or forms free from muriate,	5
As muriate,	4¼

Potash in excess of that equivalent to the chlorin present, will be valued as sulphate, and the remainder as muriate.

In certain cases where specific claim is made by the manufacturer that potash has been added as carbonate, potash in excess of that equivalent to soluble chloride and soluble sulphates will be valued as carbonate.

Nitrogen in mixed fertilizers will be valued as derived from the best sources of organic nitrogen, unless clear evidence to the contrary is obtained.

Phosphoric acid in mixed fertilizers is valued at bone phosphoric acid prices, unless clearly found to be derived from rock phosphate.

Bone is sifted into two grades of fineness: Fine, less than 1-50 inch in diameter; coarse, over 1-50 inch in diameter.

The result obtained by the use of this schedule does not cover the items of mixing. bagging, freight and agents' commission. To cover these, allowances are made as follows:

For freight, an allowance of $2.00 per ton on all fertilizers.

For bagging, allowance of $1.00 per ton on all fertilizers, except when sold in original packages.

For mixing, an allowance of $1.00 per ton on complete fertilizers and rock-and-potash goods.

For agents' commission, an allowance of 20 per cent. is added to the cash value of the goods ready for shipment.

FERTILIZER ANALYSES JANUARY 1, TO AUGUST 1, 1909.

Since January 1, 1909, there have been received from authorized sampling agents fifteen hundred and sixty-five fertilizer samples, of which six hundred and seventeen were subjected to analysis. Preference is given to those which have not been recently analyzed. In cases where two or more samples representing the same brand were received, equal portion from several samples were united, and the composite sample was subjected to analysis.

The samples analyzed group themselves as follows: 426 complete fertilizers, furnishing phosphoric acid, potash and nitrogen; 8 dissolved bones, furnishing phosphoric acid and nitrogen; 111 rock-and-potash fertilizers, furnishing phosporic acid and potash; 33 acidulated rock phosphates, furnishing phosphoric acid only; 24 ground bones, furnishing phosphoric acid and nitrogen, and fifteen miscellaneous samples, which group includes substances not properly classified under the foregoing heads.

The determinations to which a complete fertilizer is subjected are as follows: (1) Moisture, useful for the comparison of analyses, for indication of dry condition and fitness for drilling, and also of the conditions under which the fertilizer was kept in the warehouse. (2) Phosphoric acid—total, that portion soluble in water, and of the residue, that portion not soluble in warm ammonia citrate solution (a solution supposed to represent the action of plant roots upon the fertilizer), which is assumed to have little immediate food value. By difference, it is easy to compute the so-called "reverted" acid, which is the portion insoluble in water but soluble in the citrate,

The sum of the soluble and reverted is commonly called the "available" phosphoric acid. (3) Potash soluble in water—most of that present in green sand marl and crushed minerals, and even some of that present in vegetable materials such as cotton-seed meal, not being included because insoluble in water even after long boiling. (4) Nitrogen—This element is determined by a method which simply accounts for all present, without distinguishing between the quantities present in the several forms of ammonium salts, nitrates or organic matter. (5) Chlorin—this determination is made to afford a basis for estimating the proportion of the potash that is present as chlorid or muriate, the cheaper source. The computation is made on the assumption that the chlorin present, unless in excess, has been introduced in the form of muriate of potash; but doubtless there are occasional exceptions to this rule. One part of chlorin combines with 1.326 parts of potash to form the pure muriate; knowing the chlorin, it is, therefore, easy to compute the potash equivalent thereto. (7) In the case of ground bone, the state of sub-division is determined by sifting through accurately made sieves; the cost of preparation and especially the promptness of action of bone in the soil depends very largely on the fineness of its particles the finer being much more quickly useful to the plant.

The law having required the manufacturer to guarantee the amount of certain valuable ingredients present in any brand he may put upon the market, chemical analysis is employed to verify the guaranties stamped upon the fertilizer sacks. It has, therefore, been deemed desirable in this report to enter the guaranty filed by the manufacturer in the office of the Secretary of Agriculture, in such connection with the analytical results that the two may be compared. An unfortunate practice has grown up among manufacturers of so wording the guaranty that it seems to declare the presence in the goods of an amount of a valuable constituent ranging from a certain minimum to a much higher maximum; thus, "Potash, 2 to 4 per cent." is a guaranty not infrequently given. In reality, the sole guaranty is for 2 per cent. The guaranteed amounts given for each brand in the following tables, are copied from the guaranties filed by the maker of the goods with the Secretary of Agriculture, the lowest figure given for any constituent being considered to be the amount guaranteed. For compactness and because no essentially important fact is suppressed thereby, the guaranties for soluble and reverted phosphoric acid have not been given separately, but are combined into a single guaranty for available phosphoric acid; in cases where the maker's guaranty does not specifically mention available phosphoric acid, the sum of the lowest figures given by him for soluable and reverted phosphoric acid is used. The law of 1879 allowed the maker to express his guaranty for nitrogen either in terms of that element

or in terms of the ammonia equivalent thereto; since ammonia is composed of three parts of hydrogen and fourteen parts of nitrogen, it is a very simple matter to calculate the amount of one, when the amount of the other is given; the amount of nitrogen multiplied by 1.214 will give the corresponding amount of ammonia, and the amount of ammonia multiplied by 0.824 will give the corresponding amount of nitrogen. In these tables, the expression is in terms of nitrogen.

The law of 1901 abolishes this alternative and requires that the guaranty shall be given in terms of nitrogen. Many manufacturers after complying with the terms of the law, insert additional items in their guaranties, often with the result of misleading or confusing the buyer; the latter will do well to give heed to those items only that are given as the law requires and that are presented in these tables.

A summary of the analysis made this season may be presented as follows:

Summary of Analyses Made this Season.

	Complete fertilizers.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone
Number of analyses,	426	111	8	53	24
Moisture, per cent.,	8.56	8.80	7.59	7.85	4.64
Phosphoric acid:					
Total, per cent.,	9.83	11.05	12.94	15.15	22.12
Soluble, per cent.,	4.81	5.68	6.46	8.97	--------
Reverted, per cent.,	3.26	4.36	4.33	4.96	--------
Insoluble, per cent.,	1.76	1.01	2.15	1.22	--------
Potash, per cent.,	5.07	4.00	--------	--------	--------
Nitrogen, per cent.,	1.67	--------	1.57	--------	3.22
Mechanical analyses of bone:					
Fine,	--------	--------	--------	--------	71
Coarse,	--------	--------	--------	--------	29
Commercial valuation,	25.41	15.94	21.57	13.62	30.26
Average selling price,	24.88	16.98	22.25	14.76	30.70
Commercial value of samples whose selling price is ascertained,	25.31	15.94	21.57	13.62	30.28

The cases of departure of goods from their guaranteed composition observed this season, including only those cases in which it amounted to two-tenths per cent. or more, were as follows:

Summary of Instances of Defiency From Guaranty.

	Complete fertilizers.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Deficient in four constituents,	2				
Deficient in three constituents,	11	2			
Deficient in two constituents,	47	5	2	3	
Deficient in one constituent,	108	33		8	5
Total number of samples in which deficiencies occur,	168	40	2	11	5

The cases of deficiency noted during the past ten seasons in goods as compared with their guaranties expressed in percentage of the total number of goods of each class analyzed, are as follows:

Percentage of Deficiency 1903-1909.

	Spring, 1903.	Fall, 1903.	Spring, 1904.	Fall, 1904.	Spring, 1905.	Fall, 1905.	Spring, 1906.	Fall, 1906.	Spring, 1907.	Fall, 1907.	Spring, 1908.	Fall, 1908.	Spring, 1909.
Complete fertilizers,	37.5	37.9	39.5	49.2	35.3	37.5	45.4	39.5	39.4	39.3	40.0	40.0	39.5
Dissolved bone,	33.3	63.6	*	50.0	†100.0	66.6	50.0	28.5	16.6	25.0	‡50.0	16.6	25.0
Rock and potash,	32.9	43.2	50.7	35.3	36.9	33.0	42.4	40.0	43.7	49.0	39.0	38.3	36.2
Dissolved rock,	23.2	20.0	20.0	11.1	9.3	10.0	28.8	25.6	19.5	27.0	21.2	28.5	33.3
Ground bone,	33.3	------	36.3	36.8	40.0	31.4	49.0	14.7	18.5	27.8	38.0	40.0	20.8
All classes except miscellaneous,	35.1	44.7	39.6	41.4	32.5	31.4	43.8	35.8	36.1	38.9	38.8	38.3	37.6

*Only two samples analyzed for which no guarantees are reported.
†Only two samples analyzed for which guarantees are recorded.
‡Only four samples analyzed.

A comparison of the average composition of all sample of complete fertilizers for which guaranties are recorded with the average of the corresponding guaranties, for several seasons past including those of this season, follows:

Average Composition and Guaranty Compared.

	Average composition. Per cent.	Average guaranty Per cent.
Spring, 1903.		
Phosphoric acid:		
Total,	11.90	10.67
Available,	9.36	8.73
Potash,	3.85	3.63
Nitrogen,	1.58	1.61
Fall, 1903.		
Phosphoric acid:		
Total,	10.76	9.65
Available,	8.84	8.13
Potash,	4.09	3.90
Nitrogen,	1.33	1.29
Spring, 1904.		
Phosphoric acid:		
Total,	10.24	9.32
Available,	8.27	7.87
Potash,	4.09	3.90
Nitrogen,	1.58	1.55
Fall, 1904.		
Phosphoric acid:		
Total,	10.49	9.72
Available,	8.59	7.70
Potash,	2.87	2.81
Nitrogen,	1.25	1.29
Spring, 1905.		
Phosphoric acid:		
Total,	10.16	9.42
Available,	8.50	7.92
Potash,	4.55	4.22
Nitrogen,	1.61	1.58
Fall, 1905.		
Phosphoric acid:		
Total,	10.63	9.62
Available,	8.72	8.13
Potash,	2.90	2.42
Nitrogen,	1.26	1.20
Spring, 1906.		
Phosphoric acid:		
Total,	9.73	9.21
Available,	7.88	7.77
Potash,	4.21	3.95
Nitrogen,	1.57	1.53
Fall, 1906.		
Phosphoric acid:		
Total,	10.45	9.70
Available,	8.23	8.16
Potash,	3.12	2.95
Nitrogen,	1.32	1.31
Spring, 1907.		
Phosphoric acid:		
Total,	9.21	8.50
Available,	8.13	7.83
Potash,	4.55	4.31
Nitrogen,	1.52	1.47
Fall, 1907.		
Phosphoric acid:		
Total,	10.39	9.42
Available,	8.34	8.07
Potash,	3.18	2.72
Nitrogen,	1.39	1.29

Average Composition and Guaranty Compared—Continued.

	Average composition. Per cent.	Average guaranty. Per cent.
Spring, 1908.		
Phosphoric acid:		
Total,	10.07	8.91
Available,	8.29	7.61
Potash,	5.04	4.51
Nitrogen,	1.64	1.59
Fall, 1908.		
Phosphoric acid:		
Total,	10.29	9.31
Available,	8.29	7.96
Potash,	3.24	2.94
Nitrogen,	1.24	1.23
Spring, 1909.		
Phosphoric acid:		
Total,	9.83	8.98
Available,	8.07	7.66
Potash,	5.07	4.89
Nitrogen,	1.67	1.60

It is of interest to note how closely the series of valuations based upon the wholesale price of raw materials in the principal markets during the most important buying season and upon certain average allowances for expenses and profits on the part of the mixer and jobber, coincides with the retail prices later ascertained. A comparison for several seasons past is given below:

Comparison of Selling Price and Valuation, 1902-1909.

	Selling price.	Valuation.	Excess of valuation over selling price
Complete fertilizers:			
1902, Spring,	24.10	25.33	1.25
Fall,	21.83	23.31	1.48
1903, Spring,	24.57	24.15	—.42
Fall,	21.98	22.77	.79
1904, Spring,	24.28	24.99	.71
Fall,	21.82	22.53	.71
1905, Spring,	24.63	25.60	.97
Fall,	21.39	22.35	.96
1906, Spring,	23.55	24.76	1.21
Fall,	21.87	22.99	1.12
1907, Spring,	24.60	26.84	2.24
Fall,	22.71	24.59	1.88
1908, Spring,	25.69	26 23	—.54
Fall,	22.34	23.88	1.54
1909, Spring,	24.88	25.31	.43

Comparison of Selling Price and Valuation, 1902-1909—Continued.

	Selling price.	Valuation.	Excess of valuation over selling price
Dissolved bone:			
1902, Spring,	16.50	17.35	.85
Fall,	25.30	27.08	1.78
1903, Spring,	31.17	30.87	—.30
Fall,	23.67	24.57	.90
1904, Spring,	31.50	28.42	—3.08
Fall,	24.94	27.77	2.83
1905, Spring,	23.83	22.70	—1.13
Fall,	24.78	25.85	1.11
1906, Spring,	24.40	22.65	—1.75
Fall,	22.06	25.53	3.27
1907, Spring,	22.28	25.08	2.80
Fall,	22.09	27 01	4.92
1908, Spring,	21.11	23.09	1.98
Fall,	22.48	26 05	3.57
1909, Spring,	22.25	21.57	—.68
Rock and potash:			
1902, Spring,	16.45	15.05	—1.40
Fall,	15.97	14.46	—1.51
1903, Spring,	17.20	14.74	—2.46
Fall,	15.96	14.86	—1.10
1904, Spring,	16.47	15.46	—1.01
Fall,	15.89	14.92	—.97
1905, Spring,	16.11	15.49	—.62
Fall,	15.97	15.04	—.97
1906, Spring,	16.17	15.19	—.98
Fall,	15.76	15.06	—.70
1907, Spring,	16.94	16.53	—.41
Fall,	16.58	15.82	—.76
1908, Spring,	16.86	16.24	—.62
Fall,	16.43	16.17	—.26
1909, Spring,	16.98	15.94	—1.04
Dissolved rock:			
1902, Spring,	13.73	13.49	—.24
Fall,	13.54	13.70	.12
1903, Spring,	15.13	13.34	—1.79
Fall,	14.64	13.12	—1.52
1904, Spring,	14.59	14.05	—.54
Fall,	13.89	14.09	.20
1905, Spring,	13.64	13.86	.22
Fall,	12.21	13.51	1.30
1906, Spring,	13.75	12.98	—.77
Fall,	13.45	12.99	—.46
1907, Spring,	14.04	14.72	.68
Fall,	14.16	14.67	.51
1908, Spring,	14.72	14.92	.20
Fall,	14.31	14.86	.55
1909, Spring,	14.76	13,62	—1.14
Ground bone:			
1902, Spring,	28.52	26.80	—1.72
Fall,	28.09	27.51	—.58
1903, Spring,	28.67	27.25	—1.42
Fall,	27.52	27.07	—.45
1904, Spring,	28.20	27.70	—.50
Fall,	27.02	27.97	.95
1905, Spring,	29.08	26.72	—2.36
Fall,	27.70	28.70	1.00
1906, Spring,	29.02	28.23	—.79
Fall,	27.80	29.12	1.32
1907, Spring,	31.55	29.64	—1.91
Fall,	28.92	28.80	—.12
1908, Spring,	29.04	28.96	—.08
Fall,	28.18	27.90	—1.28
1909, Spring,	30.70	30.28	—.42

COMPLETE

Furnishing Phosphoric Acid,

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Allentown Manufacturing Co., Allentown, Pa.				
215	Complete Bone Phosphate,	D. H. Hopkins, Supt., Orefield.	5.18	4.76	2.71
217	High Grade Potato Phosphate,	Harry Mumma, Orefield,	4.25	3.40	3.82
	American Agricultural Chemical Co., New York.				
1092	†Complete Manure with 10 per cent. Potash.	Rose & McDowell, Mansfield,	8.13	3.88	2.93
830		J. L. Saegers, Westfield,			
1200		Keystone Grape Co., North East.			
825	Complete Manure with 10 per cent. Potash.	E. C. Blackwell, Nelson,	6.31	.77	4.05
643	†High Grade Cabbage Grower,	E. E. Aiken, Elwood,	10.96	6.44	2.78
316		W. H. McMahan, Troy,			
1132		Geo. L. Ebbs, Warriors Mark,			
1093	High Grade Tobacco Manure,	Rose & McDowell, Mansfield,	7.45	2.02	4.64
1198	Keystone Grape Special,	Keystone Grape Co., North East.	5.70	7.63	2.16
835	No. 2 Celery Special,	H. G. Webster, Wellsboro,	8.98	5.04	2.17
837	No. 3 Celery Special,	Adam & Wedge, Middleburg Centre.	8.10	6.58	1.28
838	No. 4 Celery Special,	Adam & Wedge, Middleburg Centre.	6.75	5.94	2.08
1390	Potato Phosphate,	I. J. Tustin, Phoenixville,	10.60	5.30	3.29
342	†Special Potash Mixture,	E. J. Hutchison, Polk,	10.13	5.92	2.91
338		C. W. Lambfair, Stoneboro,			
740		S. Erhart, Dallastown,			
189	†10 per cent. Potash Mixture for Potatoes.	John H. Way, Coleman,	8.18	3.72	1.88
158		R. A. Richards & Co., Mendenhall.			
327		Wysox Coal and Hay Co., Wysox.			
328		Wysox Coal and Hay Co., Wysox.			
95	†Bradley's B. D. Sea Fowl Guano,	S. J. Saint, Sharpsburg,	11.80	5.99	2.15
350		Schultz & Pardoe, Franklin,			
78	†Bradley's Bean and Potato Phosphate.	Beaver Hdw. Co., Beaver,	10.15	7.85	.58
32		C. C. Moore, Sharpsville,			
671		Eli Yost, McEwensville.			
31	Bradley's Complete Manure for Potatoes and Vegetables.	C. C. Moore, Sharpsville,	6.38	6.72	2.45
30	Bradley's Dissolved Bone and Potash.	C. C. Moore, Sharpsville,	7.63	5.37	2.90
672	†Bradley's Niagara Phosphate,	Eli Yost, Watsontown,	13.06	4.60	2.74
349		Schultz & Pardoe, Franklin,			
974		Chas. Robinson, Edenberg,			
1052	Bradley's Potato Fertilizer,	S. Krause & Son, Marwood,	9.88	4.46	3.19
1040	Canton Chemical Baker's Fish Guano.	J. A. Nesbit, Livermore,	11.41	5.38	3.09
1220	Canton Chemical Baker's Standard H. G. Guano.	J. P. Herman, Gordonville,	9.98	3.57	4.91
346	Canton Chemical C. C. C. Special Compound.	State Inst. for Feeble-Minded, Polk.	10.68	6.44	2.08
239	†Canton Chemical Baker's Special Wheat, Corn and Grass Mixture.	Louis Heffner, Pine Grove,	11.03	5.99	3.17
50		Walter Agar, Mill Hall,			
521		J. D. Miller, Roekwood,			
1373	Canton Chemical Eagle Phosphate,	A. H. Keely & Son, Schwenksville.	9.15	2.33	4.68

†Composite sample.

FERTILIZERS.

Potash and Nitrogen.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
3.25	10.72	10.00	7.47	6.00	4.51	-------	4.51	4.00	2.00	1.50	26.50	24.00	215
3.45	10.67	10.00	7.22	6.00	.93	7.26	8.19	8.00	2.20	1.50	32.22	25.00	217
2.91	9.72	7.00	6.81	6.00	9.74	-------	*9.74	10.00	*3.04	3.29	35.83	47.50 37.00 34.00	1092 830 1200
8.14	12.96	7.00	*4.82	6.00	1.47	7.31	†*8.78	10.00	3.46	3.29	38.47	45.00	825
1.66	10.88	10.00	9.22	9.00	6.81	-------	6.81	7.00	1.33	.82	26.83	27.00 25.00 24.00	643 316 1132
4.02	10.68	6.00	6.66	5.00	.67	5.75	†*6.42	9.00	*5.01	5.76	42.56	57.50	1093
1.60	11.39	9.00	9.79	8.00	1.73	5.93	*7.66	8.00	*3.40	4.11	38.71	35.00	1198
2.04	9.25	8.00	7.21	7.00	16.20	-------	16.20	15.00	1.81	1.65	36.78	31.60	835
.99	8.85	8.00	7.86	7.00	15.68	-------	15.68	15.00	2.39	2.47	39.24	33.60	837
.92	8.94	8.00	8.02	7.00	15.15	-------	15.15	15.00	3.17	3.29	42.13	36.00	838
.99	9.58	9.00	8.59	8.00	5.10	-------	5.10	5.00	1.81	1.65	26.16	28.00	1390
1.96	10.79	10.00	8.83	9.00	6.29	-------	*6.29	7.00	1.13	.82	25.04	27.00 27.00 22.25	342 338 740
1.19	6.79	6.00	5.60	5.00	10.15	-------	10.15	10.00	1.70	1.65	28.23	28.00 28.00 28.00 25.00	189 158 327 328
2.22	10.36	9.00	8.14	8.00	2.07	-------	2.07	1.50	2.01	2.06	24.24	26.00 30.00	95 350
1.63	10.06	9.00	8.43	8.00	3.92	-------	3.92	4.00	.90	.82	21.30	25.00 23.00 20.50	78 32 671
1.64	10.81	9.00	9.17	8.00	4.61	-------	*4.61	7.00	*1.01	3.29	22.94	23.00	31
1.62	9.89	9.00	8.27	8.00	2.81	-------	2.81	2.00	1.10	1.03	20.66	23.00	30
1.91	9.25	8.00	7.34	7.00	1.77	-------	1.77	1.00	1.08	.82	18.85	15.00 24.00 22.00	672 349 974
2.34	9.99	9.00	*7.65	8.00	3.15	-------	3.15	3.00	*1.47	2.06	22.32	27.00	1052
2.14	10.61	9.00	8.47	8.00	3.16	-------	3.16	2.00	1.55	1.65	23.46	24.00	1040
1.49	9.97	9.00	8.48	8.00	3.22	-------	3.22	3.00	1.97	2.06	24.80	25.00	1220
1.36	9.88	9.00	8.52	8.00	7.18	-------	7.18	6.00	2.54	2.06	31.98	-------	346
1.28	10.44	10.00	9.16	9.00	2.37	-------	2.37	2.00	1.08	.82	20.85	20.00 ------ 22.00	239 50 521
1.16	8.17	8.00	7.01	7.00	1.16	-------	1.16	1.00	1.03	.82	17.08	21.00	1373

*Constituent falls below guaranty.
†No potash present as carbonate see page 20.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
629	†Canton Chemical Potato Manure,	K. E. Algeo, Mt. Lebanon,	10.00	4.54	2.27
49		Walter Agar, Mill Hall,			
1349		John B. Buckman, Newtown,			
238	†Canton Chemical Resurgam Guano,	Louis Heffner, Pine Grove,	6.83	6.44	2.19
1351		John B. Buckman, Newtown,			
117	†Crocker's Complete Manure,	G. E. Beach, E. Smithfield,	9.78	6.07	2.30
1543		D. M. Parkhill, Connellsville,			
429	†Crocker's General Crop Fertilizer,	Jno. Harbison, Indiana,	8.68	4.81	3.21
337		C. W. Lambfair, Stoneboro,			
967		J. W. Hartwell, New Wilmington.			
1168	†Clark's Cove Defiance Fertilizer,	Simon R. Carl, Catawissa,	9.13	3.95	3.34
1418		B. F. Landing, Ringtown,			
190	Clark's Cove King Philip Alkaline Guano.	John H. Way, Coleman,	7.78	7.01	2.49
1047	†Detrick's Corn and Oats Fertilizer,	B. F. Shanon & Co., Butler,	11.35	7.01	2.90
4		Jas. McCauley, Mifflintown,			
1172		W. H. Adams & C. M. Young, Catawissa.			
200	†Detrick's Paragon Ammoniated Bone Phosphate and Potash.	J. S. Jobst, Emaus,	10.55	3.72	3.72
1489		W. S. Leeper & Son, Laurelville.			
199	†Detrick's Quickstep Bone Phosphate for Potatoes and Tobacco.	J. S. Jobst, Emaus,	11.55	5.99	2.28
2		Jos McConiley, Mifflintown,			
267		Newton Gonder, Boswell,			
345	†Detrick's Royal Crop Grower,	State Inst. for Feeble-Minded, Polk.	10.25	5.48	2.97
265		Newton Gonder, Boswell,			
1171		F. H. Adams and C. M. Young, Catawissa.			
773	Detrick's Standard Potash Fertilizer,	Levi Berkey, Somerset,	8.50	3.10	3.29
186	†Great Eastern Fertilizer General,	Alex. Trent, Coleman,	10.65	5.79	2.69
29		J. J. Garrett, West Middlesex,			
361		E. M. DeLong & Son, Loganton.			
185	†Great Eastern Northern Corn Special.	Alex. Trent, Coleman,	10.38	6.88	2.79
313		L. E. Harkness, Columbia X Roads.			
367	Great Eastern Vegetable, Vine and Tobacco Fertilizer.	G. E. Faron, Jersey Shore,	9.08	5.11	3.44
750	†Lazaretto Ammoniated Bone Phosphate.	Grove & Uffelman, Broguetville Station.	10.53	4.89	3.41
1080		E. S. Couser, Snydertown,			
749	Lazaretto Special Potato Fertilizer,	Grove & Uffelman, Broguetville Station.	9.88	5.09	3.16
344	†Maryland Special Compound for Potatoes and Tobacco.	State Inst. for Feeble-Minded, Polk.	9.63	5.33	2.19
105		J. P. Griffith.			
1359		Worthington & Stiner, Buckingham Valley.			
41	Michigan Carbon Works, Homestead. A Bone Black Fertilizer.	L. P. Arner, Greenville,	4.68	6.08	2.67
891	†Milsom's Buffalo Fertilizer,	A. McFayden, Erie,	11.50	4.82	3.47
644		T. McConnell & Son, Portersville.			
1477		N. H. Long, Greensburg,			
654	†Milsom's Buffalo Guano,	C. L. Shipman, Hughesville,	9.45	5.84	2.37
188		John H. Way, Coleman,			
890		A. McFayden, Erie,			
639	Milsom's Corn Fertilizer,	Benj. Wiley, Elwood,	10.93	6.58	2.50
848	Milsom's Erie King Fertilizer,	H. G. Morehead, Indiana,	10.19	4.49	3.69
996	Milsom's Potato, Hop and Tobacco Fertilizer.	Dunlap Bros., Canonsburg,	8.85	4.65	3.17
995	†Milsom's Wheat, Oats and Barley Fertilizer.	Dunlap Bros., Canonsburg,	9.75	5.60	3.01
1535		Gordon & Longanecker, Waynesburg.			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
												{30.00	629
1.47	8.28	7.00	6.81	6.00	5.45	-------	5.45	5.00	1.39	1.23	23.34	{------	49
												{26.00	1349
.64	9.27	9.00	8.63	8.00	4.26	-------	4.26	4.00	1.04	.82	21.85	{21.00	238
												{25.00	1351
1.42	9.79	9.00	8.37	8.00	4.38	-------	4.38	4.00	1.05	.82	22.14	{23.00	117
												{25.00	1543
												{20.00	429
1.98	10.00	8.00	8.02	7.00	2.93	-------	2.93	1.00	1.17	.82	20.91	{20.00	337
												{20.00	967
												{19.00	1168
.78	8.07	8.00	7.29	7.00	1.43	-------	1.43	1.00	1.00	.82	17.41	{20.00	1418
1.15	10.65	9.00	9.50	8.00	2.55	-------	2.55	2.00	1.17	1.03	21.62	20.50	190
												{22.00	1047
1.21	11.12	10.00	9.91	9.00	3.21	-------	3.21	3.00	.89	.82	21.50	{20.00	4
												{22.00	1172
												{20.00	200
1.45	8.89	8.00	7.44	7.00	2.10	-------	2.10	1.00	1.19	.82	19.42	{19.00	1489
												{28.00	199
1.71	9.98	9.00	8.27	8.00	4.06	-------	4.06	4.00	2.39	2.47	27.98	{28.00	2
												{28.00	267
												{------	345
1.71	10.16	9.00	8.45	8.00	2.94	8.00	2.94	2.00	1.60	1.65	23.29	{22.50	265
												{24.00	1171
1.86	8.25	7.00	6.39	6.00	5.37	-------	5.37	5.00	1.33	1.23	22.65	21.00	773
												{21.00	186
1.24	9.72	9.00	8.48	8.00	4.00	-------	4.00	4.00	.92	.82	21.00	{22.00	29
												{25.85	361
												{26.00	185
1.86	11.53	10.00	9.67	9.00	2.33	-------	2.33	2.00	2.70	2.47	28.98	{26.25	313
1.90	10.45	9.00	8.55	8.00	2.32	-------	3.32	3.00	2.17	2.06	26.29	28.00	367
												{17.50	750
1.27	9.57	9.00	8.30	8.00	2.16	-------	2.16	2.00	.91	.82	18.86	{19.00	1080
1.39	9.64	9.00	8.25	8.00	4.16	-------	4.16	4.00	.82	.82	20.50	19.50	749
												{------	344
2.17	9.69	9.00	*7.52	8.00	9.37	-------	*9.37	10.00	1.72	1.65	29.71	{30.00	105
												{28.00	1359
2.42	11.17	9.00	8.75	8.00	3.67	-------	3.67	1.50	*1.58	2.06	24.66	25.00	41
												{25.00	891
2.17	10.46	9.00	8.29	8.00	2.08	-------	2.08	1.50	2.18	2.06	25.17	{26.00	644
												{------	1477
												{21.00	654
1.62	9.83	9.00	8.21	8.00	4.27	-------	4.27	4.00	1.07	.82	21.92	{24.00	188
												{24.00	890
2.01	11.09	10.00	9.08	9.00	2.86	-------	2.86	2.00	*2.15	2.47	26.50	27.50	639
1.75	9.93	8.00	8.18	7.00	1.26	-------	1.26	1.00	1.09	.82	18.96	21.00	848
2.58	10.40	9.00	7.82	8.00	3.75	-------	3.75	3.00	*1.85	2.06	25.03	30.00	996
												{24.00	995
1.72	10.34	9.00	8.62	8.00	2.28	-------	2.28	2.00	.99	.82	20.05	{22.00	1535

*Constituent falls below guaranty

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
343	Milsom's Vegetable Bone Fertilizer,	State Inst. for Feeble-Minded, Polk.	8.08	5.24	2.25
916	†Moro-Phillips Farmers' Potato Mixture.	S. H. Donkel, Crosskill Mills,	7.53	3.21	3.54
1210		B. F. Walker, Christiana,			
1388	Moro-Phillips Special Compound,	I. J. Tustin, Phoenixville,	12.68	5.04	3.66
508	†Northwestern Challenge Crop Grower.	Jefferson Altfother, Berlin,	10.70	5.80	2.72
1182		F. R. Jennings, Tidioute,			
507	Northwestern H. G. General Fertilizer.	Jefferson Altfother, Berlin,	8.18	6.12	2.68
737	Northwestern Success Phosphate,	Albert Baker, Emigsville,	9.55	5.10	2.03
1180	†Northwestern 10 per cent. Potato Fertilizer.	F. R. Jennings, Tidioute,	8.18	4.83	3.50
220		John Mittman, Rittersville,			
1562		E. C. Rogers, Brooklyn,			
847	†Paeific Potato Phosphate,	Jos. L. Culp, Indiana,	9.20	4.12	4.39
213		D. H. Hopkins, Supt., Orefield.			
851		Smith & McKelvey, Blairsville,			
315	†Packer's Union Animal Corn Fertilizer.	W. H. McMahon, Troy,	11.10	6.82	2.77
170		W. H. Barron, Johnstown,			
884		C. E. Starr, Three Springs,			
111	†Packer's Union Gardener's Complete Manure.	C. Gerould, Milan,	9.10	5.34	1.67
1510		M. L. King, South Fork,			
169	Packer's Union Potato Manure,	W. H. Barron, Johnstown,	7.03	5.10	3.31
910	Packer's Union Universal Fertilizer,	M. Croll, Youngsville,	11.58	5.61	2.79
109		C. Gerould, Milan,			
1077		Harry Leiby, Snydertown,			
212	†Quinnipiae Climax Phosphate,	B. F. Heilman, Orefield,	12.03	5.80	2.45
106		N. F. Walker, Athens,			
846		Jos. L. Culp, Indiana,			
107	Quinnipiae Mohawk Fertilizer,	N. F. Walker, Athens,	6.33	5.69	2.37
1554	Read's Farmer's Friend Superphosphate.	Billings & Kelder, New Albany,	11.93	6.06	2.31
13	Read's Leader Blood and Bone,	W. V. Shirk, Oakland Mills,	6.15	7.43	1.30
18	Read's Standard Superphosphate,	W. V. Shirk, Oakland Mills,	7.39	5.67	2.56
1363	Reese's Ammoniated Bone Phosphate Mixture.	W. M. Holbert, Warrington,	10.73	5.76	3.04
1556	Reese's Challenge Crop Grower,	B. J. Dougherty, Meshoppen,	9.50	6.46	1.73
588	Reese's Harvest Queen,	Harry Wilson, Frazer,	12.33	4.84	3.40
527	†Reese's Potato Manure,	Walker & Walker, Glade,	10.15	5.18	3.54
234		Harry Keefer, Pine Grove,			
917		A. G. Houtz, Truckville,			
833	†Sharpless & Carpenter Farmers' Bone Phosphate.	Dearfield Milling Co., Knoxville.	10.40	6.43	2.52
961		Farmers' Supply Co., New Castle.			
479	†Sharpless & Carpenter Gilt Edge Potato and Tobacco Manure.	Lewis Wicklein, Hummel's Store.	8.60	6.74	2.02
113		Peter Bendette, Milan,			
821		E. C. Blackwell, Nelson,			
944	Sharpless & Carpenter No. 1 Bone Phosphate.	A. B. Shoemaker, Tullytown,	11.43	6.08	1.79
941	†Sharpless & Carpenter Potato, Corn and Truck Guano.	A. B. Shoemaker, Tullytown,	9.10	4.54	2.42
831		J. L. Saegers, Westfield,			
962		Farmers' Supply Co., New Castle.			
823	†Sharpless & Carpenter Soluble Tampico Guano.	E. C. Blackwell, Nelson,	9.15	6.67	2.28
942		A. B. Shoemaker, Tullytown,			
1374	†Susquehanna Ammoniated Bone Phosphate.	A. H. Keely & Son, Sehwenksville.	10.20	5.23	2.95
1458		Wm. E. Hoover, Catawissa,			
295	†Susquehanna Potato Phosphate,	Eli Greist, Cessna,	9.90	5.36	3.60
53		J. N. Getz Co., Lock Haven,			
1344		E. Schmaltz, Richland,			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
3.44	10.93	9.00	*7.49	8.00	7.35	-------	7.35	7.00	*3.07	3.29	34.40	-------	343
.87	7.62	7.00	6.75	6.00	5.38	-------	5.38	5.00	1.28	1.23	22.30	24.00	916
												21.00	1210
1.08	9.78	9.00	8.70	8.00	6.09	-------	6.09	6.00	2.17	2.06	28.88	30.00	1388
1.31	9.83	9.00	8.52	8.00	2.34	-------	2.34	2.00	1.22	1.03	20.78	20.00	508
												25.00	1182
1.64	10.44	9.00	8.80	8.00	4.07	-------	4.07	4.00	1.82	1.65	25.65	25.50	507
1.54	8.67	8.00	7.13	7.00	1.78	-------	1.78	1.00	1.07	.82	18.34	18.50	737
												34.00	1180
2.28	10.61	9.00	8.33	8.00	9.56	-------	*9.56	10.00	1.73	1.65	30.80	29.00	220
												31.00	1562
												26.00	847
1.81	10.32	7.00	8.51	6.00	4.85	-------	4.85	5.00	1.49	1.23	24.68	20.00	213
												28.00	851
												27.00	315
2.04	11.63	10.00	9.59	9.00	2.33	-------	2.33	2.00	2.56	2.47	28.30	26.00	170
												30.00	884
1.08	8.09	7.00	7.01	6.00	9.05	-------	*9.05	10.00	3.14	3.29	35.05	34.50	111
												33.00	1510
2.00	10.41	9.00	8.41	8.00	7.12	-------	7.12	6.00	2.30	2.06	30.76	28.50	169
												25.00	910
1.54	9.94	9.00	8.40	8.00	4.32	-------	4.32	4.00	.98	.82	21.82	21.60	109
												21.00	1077
												17.00	212
1.45	9.70	9.00	8.25	8.00	2.33	-------	2.33	2.00	1.10	1.03	20.14	20.00	106
												21.00	846
1.12	9.18	8.00	8.06	7.00	1.36	-------	1.36	1.00	.91	.82	17.90	20.00	107
1.94	10.31	9.00	8.37	8.00	3.49	-------	3.49	3.00	1.87	2.06	25.09	26.00	1554
1.16	9.89	8.00	8.73	7.00	1.16	-------	1.16	1.00	.82	.82	18.02	18.00	13
1.50	9.73	9.00	8.23	8.00	4.30	-------	4.30	4.00	.93	.82	21.46	20.00	18
1.45	10.25	10.00	*8.80	9.00	3.06	-------	3.06	3.00	.96	.82	20.62	25.00	*363
1.40	9.59	9.00	8.19	8.00	2.60	-------	2.60	2.00	1.18	.82	20.86	21.00	1556
.99	9.23	9.00	8.24	8.00	2.18	-------	2.18	2.00	1.19	1.03	20.11	20.00	588
												23.00	527
1.54	10.26	10.00	*8.72	9.00	6.82	-------	6.82	7.00	.93	.82	24.34	26.00	234
												24.00	917
1.62	10.57	9.00	8.95	8.00	4.14	-------	4.14	4.00	1.00	.82	22.26	24.00	833
												25.00	961
												30.00	479
1.63	10.39	9.00	8.76	8.00	8.80	-------	*8.80	10.00	1.74	1.65	30.31	29.00	113
												30.00	821
.84	*8.71	9.00	7.87	8.00	2.43	-------	2.43	2.00	1.70	1.65	22.38	24.00	944
												25.00	941
1.53	8.49	7.00	6.96	6.00	5.55	-------	5.55	5.00	1.26	1.23	22.89	28.00	831
												27.00	962
.96	9.91	9.00	8.95	8.00	7.33	-------	2.32	2.00	1.71	1.65	35.95	34.00	1374
												34.00	942
1.58	9.76	9.00	8.18	8.00	2.32	-------	2.32	2.00	1.71	1.65	22.77	24.00	1374
												21.50	1458
												25.50	295
1.31	10.27	9.00	8.96	8.00	5.41	-------	5.41	5.00	1.64	1.65	26.22	29.50	53
												------	1344

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
54	Susquehanna Special Potato and Tobacco Manure.	J. N. Getz Co., Lock Haven,	5.30	4.72	4.26
567	†Susquehanna XXV Phosphate,	Henry Moyer, Campbelltown,	10.21	4.76	3.28
52		J. N. Getz Co., Lock Haven,			
677		Henry Sunday, East Berlin,			
1353	Allen's Popular Phosphate,	J. A. Danenhower, Southampton.	13.59	2.98	5.23
1352	Allen's Special Brand Potato Manure.	J. A. Danenhower, Southampton.	13.03	5.33	3.56
781	Tygert-Allen's Star Potato Grower,	J. C. McMillan, Caselman,	7.50	3.00	3.50
119	†Tygert-Allen 10 per cent. Potato and Vegetable Manure.	C. E. Beach, East Smithfield,	8.74	6.27	1.98
1354		J. A. Danenhower, Southampton.			
184	†Wheeler's Corn Fertilizer,	C. F. Walker, Shanksville,	11.33	5.14	3.08
67		J. A. Gummo, Mill Hall,			
334		H. Burnham, Bentley Creek,			
64	†Wheeler's Potato Manure,	J. A. Gummo, Mill Hall,	9.73	5.33	2.98
641		E. E. Aiken, Elwood,			
112	Williams & Clark Americus Universal Ammoniated Dissolved Bone.	Peter Burdette, Milan,	10.13	6.50	2.17
331	†Zell's Economizer Phosphate,	C. E. Drake, Athens,	9.78	5.60	2.65
15		W. V. Shirk, Oakland Mills,			
741		A. Ehrhart, Dallastown,			
1546	Zell's Little Giant,	The Ohio Pyle Co., Ohio Pyle,	12.50	4.89	3.39
332	†Zell's Special Compound for Potatoes and Vegetables.	C. E. Drake, Athens,	9.89	7.31	1.67
1290		O. F. Arnold, Dillsburg,			
	American Fertilizer Co., Baltimore, Md.				
278	American Fish and Bone Compound,	N. Blough, Holsopple,	7.85	6.28	1.88
280	American Prize Truck Guano,	N. Blough, Holsopple,	2.35	5.92	2.21
	American Reduction Co., Pittsburg, Pa.				
635	Century Phosphate and Potash,	D. B. Douds & Son, Monaceo,	4.90	2.71	4.53
1005	†Common Sense,	R. C. Leeper, Frankfort Springs.	5.03	2.75	4.49
1035		H. M. Shearer, New Alexandria.			
1004	Iron City,	R. C. Leeper, Burgettstown,	5.90	3.88	3.83
984	†Vegetable Manure,	S. G. Matchett, Clinton,	4.48	2.42	3.58
634		D. B. Douds & Son, Monaceo,			
1034		H. M. Shearer, New Alexandria.			
	Armour Fertilizer Works, The, Baltimore, Md.				
819	†Armour's Bone, Blood and Potash,	G. S. Walker, Tioga,	8.25	6.25	1.66
771		H. C. Beerits & Son, Somerset,			
1066		Edgar Blue, Pottsgrove,			
258	†Armour's Fruit and Root Crop Special.	M. L. Bachman, Lebanon,	9.03	4.98	2.49
167		S. Hoffman, Chadds Ford,			
354		S. S. Bryan, Titusville,			
208	†Armour's High Grade Potato,	J. Singmaster, Macungie,	7.75	5.84	2.00
168		S. Hoffman, Chadds Ford,			
259		M. L. Bachman, Lebanon,			
336	†Armour's Royal Ammoniated Bone,	Merton Pitt, Gillet,	7.67	6.12	1.67
166		S. Hoffman, Chadds Ford,			
375		S. G. Updegraff, Williamsport,			
1178	Wheat, Corn and Oats Special,	H. C. Mapes, Tidioute,	6.65	3.57	2.73
1065	†Armour's Wheat Special,	Edgar Blue, Pottsgrove,	7.35	6.58	1.71
968		Wm. A. Rust, New Wilmington			
1216		J. G. Walker & Sons Co., Gap.			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.40	10.38	9.00	8.98	8.00	10.44	-------	10.44	10.00	1.62	1.65	31.16	35.00	54
1.82	9.86	9.00	8.04	8.00	1.22	-------	1.22	1.00	.91	.82	17.92	19.00 24.50 19.00	567 52 677
1.45	9.66	9.00	8.21	8.00	2.38	-------	2.38	2.00	.98	.82	19.35	23.00	1353
.87	9.76	9.00	8.89	8.00	6.39	-------	6.39	3.00	1.89	2.06	28.12	32.00	1352
1.87	8.37	7.00	6.50	6.00	5.20	-------	5.20	5.00	1.46	1.23	23.02	21.40	781
.99	9.24	9.00	8.25	8.00	10.96	-------	10.96	10.00	1.77	1.65	31.71	31.00 35.00	119 1354
2.01	10.23	9.00	8.22	8.00	2.24	-------	2.24	2.00	1.73	1.65	23.18	24.00 24.50 21.00	184 67 334
1.84	10.15	9.00	8.31	8.00	3.40	-------	3.40	3.00	2.06	2.06	25.72	25.50 26.00	64 641
1.85	10.52	9.00	8.67	8.00	2.82	-------	2.82	2.00	1.72	1.65	23.95	22.00	112
1.54	9.79	9.00	8.25	8.00	2.21	-------	2.21	2.00	.93	.82	19.33	21.50 19.00 18.00	331 15 741
1.67	9.95	8.00	8.28	7.00	1.98	-------	1.98	1.00	.94	.82	19.12	24.00	1546
1.31	10.29	9.00	8.98	8.00	4.01	-------	4.01	4.00	2.43	2.47	28.71	20.00 27.50	332 1290
1.95	10.11	9.00	8.16	8.00	3.73	-------	3.73	3.00	2.19	1.65	26.80	24.00	278
1.34	9.47	9.00	8.13	8.00	1.07	9.13	10.20	10.00	1.92	1.65	33.27	29.00	280
1.61	8.85	8.00	7.24	7.00	4.78	-------	4.78	4.00	1.46	1.23	23.10	24.00	635
1.53	3.77	8.00	7.24	7.00	1.92	-------	1.92	1.00	1.30	1.23	19.41	21.06 20.00	1005 1035
1.79	9.50	9.00	*7.71	8.00	3.14	-------	3.14	2.00	1.62	1.65	22.71	23.00	1004
2.12	8.12	7.00	6.00	6.00	2.67	3.17	5.84	6.00	2.55	2.47	28.90	------ 28.00 28.00	984 634 1034
.97	8.88	9.00	7.91	8.00	6.57	-------	*6.57	7.00	*3.00	4.10	32.64	42.00 24.00 34.50	819 771 1066
1.90	9.37	9.00	*7.47	8.00	4.83	-------	4.83	5.00	1.53	1.64	24.18	24.00 26.00 30.00	258 167 354
.98	8.82	9.00	7.84	8.00	10.54	-------	10.54	10.00	1.63	1.64	30.44	29.00 30.00 28.00	208 168 259
1.11	8.90	9.00	*7.79	8.00	4.42	-------	4.42	4.00	.83	.82	20.59	24.00 22.00 24.00	336 166 375
1.54	7.84	8.00	*6.30	7.00	1.18	-------	1.18	1.00	.78	.82	15.74	25.00	1178
32	*8.61	9.00	8.29	8.00	2.49	-------	2.49	2.00	.85	.82	18.74	17.00 32.00 20.00	1065 968 1216

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphorie	
				Soluble in water.	Reverted.
	Atlantic Fertilizer Co., The, Baltimore, Md.				
752	†Arrow Brand Special,	Grove & Uffelman, Brogueville.	5.10	2.46	6.24
1279		Biglerville Warehouse Co., Biglerville.			
764	Atlantic Crop Producer,	B. F. Goodwin, New Freedom,	3.00	2.51	4.61
1278	Atlantic Special Compound for Potatoes and Tobacco.	Biglerville Warehouse Co., Biglerville.	4.50	4.55	4.26
1277	Atlantic Standard Bone Compound,	Biglerville Warehouse Co., Biglerville.	8.75	1.98	5.31
	Baltimore Fertilizer Co., Baltimore, Md.				
1150	Honest Potato Grower,	J. R. Allen, McVeytown,	4.30	2.85	3.57
1149	†Old Honesty Your Money's Worth,	J. R. Allen, McVeytown,	4.50	3.40	4.60
1513		Skyles Miller & Co., Martinsburg.			
	J. H. Bartenschlager, Stewartstown, Pa.				
753	Bartenschlager Champion,	J. H. Bartenschlager, Stewartstown.	8.38	4.56	4.56
	Baugh & Sons Co., Philadelphia, Pa.				
698	†Baugh's Ammoniated Soluble Alkaline.	J. N. Ruff, New Oxford,	7.15	3.58	5.24
376		S. G. Updegraff, Williamsport,			
814		Kipp & Moore, Millerstown,			
506	Baugh's Complete Animal Bone Fertilizer.	——— ———, Berlin,	9.92	6.35	2.32
763	†Baugh's Complete Animal Bone Fertilizer.	B. F. Goodwin, New Freedom,	8.55	5.69	3.00
138		E. H. Keen & Co., Parkesburg.			
1030		Allison & Fogelsonger, Shippensburg.			
476	†Baugh's Double Eagle Twenty-five Dollar Phosphate.	W. K. Musselman, Bowmansville.	9.95	6.63	3.08
130		E. A. and J. S. Pennock, Chatham.			
720		H. H. Loose, Menges Mills,			
377	†Baugh's Excelsior Guano,	S. G. Updegraff, Williamsport,	8.95	7.09	1.69
128		Pennock & Brosius, Avondale,			
414		D. J. Davis, Ebensburg,			
697	†Baugh's General Crop Grower for all Crops.	J. N. Ruff, New Oxford,	6.98	4.16	4.74
478		W. K. Musselman, Bowmansville.			
827		L. Plank, Westfield,			
413	Grand Rapid H. G. Truck Guano,	D. J. Davis, Ebensburg,	6.95	6.37	2.88
379	†Baugh's Peninsula Grain Producer,	S. G. Updegraff, Williamsport	8.18	5.29	3.65
1265		H. D. and J. F. Bream, Gettysburg.			
953	Baugh's Peruvian Guano Substitute for Potatoes and all Vegetables.	A. Erwin, Huntingdon Valley,	8.93	5.74	1.57
1023	†Baugh's Potato and Truck Special for all Truck Crops.	N. F. Reed, New Cumberland,	9.53	5.66	2.12
952		A. Erwin, Huntingdon Valley,			
1413		Yost & Kleckner, Ringtown,			
129	Baugh's Southern States Excelsior Guano.	E. A. and J. S. Pennock, Chatham.	7.56	6.92	1.96
505	Baugh's Special Potato Manure,	——— ———, Berlin,	9.58	4.47	1.53
638	†Baugh's Special Potato Manure,	W. H. Blinn, New Brighton,	9.45	3.46	2.04
127		Pennock & Brosius, Avondale,			
828		L. Plank, Westfield,			
405	Baugh's 2—8—10,	H. F. Kistler, Wanamakers,	4.63	7.69	1.63
477	†The Wrapper Leaf Brand. A Special Manure for Seed Leaf Tobacco.	W. K. Musselman, Bowmansville.	6.35	3.61	2.14
1070		John Ravert, Watsontown,			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.20	9.90	-------	8.70	8.00	4.63	-------	4.63	4.00	.97	.82	21.66	19.50	752
												20.00	1279
.93	8.05	-------	*7.12	8.00	2.57	-------	2.57	1.00	.53	.41	16.23	15.00	764
1.12	9.93	-------	8.81	5.00	9.27	-------	*9.27	10.00	1.60	1.65	29.62	27.50	1278
1.70	8.99	-------	*7.29	8.00	4.20	-------	4.20	2.00	*1.40	1.65	22.26	22.00	1277
.56	6.98	-------	6.42	6.00	7.81	-------	7.81	8.00	1.77	1.60	26.36	30.00	1150
.70	8.70	-------	8.00	8.00	2.57	-------	2.57	2.00	.61	.40	17.20	-------	1179
												18.00	1513
1.91	11.03	10.00	9.12	8.00	3.47	-------	*3.47	4.00	1.23	1.24	22.77	20.00	753
												16.00	698
2.29	11.11	-------	8.82	8.00	2.42	-------	2.42	2.00	.69	.41	16.80	22.00	376
												16.75	814
2.36	11.03	-------	8.67	8.00	4.69	-------	*4.69	5.00	1.77	1.65	26.38	-------	506
												24.00	763
1.96	10.65	-------	8.69	8.00	5.56	-------	5.56	5.00	1.79	1.65	27.20	24.00	138
												25.00	1030
												26.00	476
2.32	12.03	-------	9.71	8.50	1.61	-------	1.61	1.00	1.72	1.65	23.88	23.00	139
												21.00	720
												24.00	377
2.96	11.74	-------	8.78	8.00	4.10	-------	4.10	4.00	1.01	.82	22.81	23.00	128
												22.00	414
												18.00	697
2.21	11.11	-------	8.90	8.00	1.45	-------	1.45	1.00	.99	.82	19.47	22.00	478
												20.00	827
1.62	10.87	-------	9.25	8.00	3.73	-------	3.73	3.00	2.62	2.47	29.38	27.00	413
2.61	11.55	-------	8.94	8.00	2.50	-------	2.50	2.00	1.36	1.00	22.52	22.00	379
												20.50	1265
1.72	9.03	-------	7.31	6.00	7.26	-------	7.26	7.00	4.03	4.12	37.94	37.00	953
												32.00	1023
1.77	9.55	-------	7.78	7.00	7.18	-------	7.18	7.00	2.98	2.88	33.50	34.00	952
												33.00	1413
4.02	12.90	-------	8.88	8.00	4.47	-------	4.47	3.00	1.06	1.00	23.96	22.00	129
2.31	8.31	-------	6.00	5.00	10.73	-------	10.73	10.00	2.06	1.65	31.40	-------	505
												30.00	638
2.57	8.07	-------	5.50	5.00	11.09	-------	11.09	10.00	1.82	1.65	30.20	28.00	127
												28.50	828
1.16	10.48	-------	9.32	8.00	8.67	2.60	11.27	10.00	1.86	1.65	34.64	28.00	405
1.29	7.04	-------	5.75	3.50	6.24	-------	6.24	5.00	*2.91	3.30	29.89	32.00	477
												26.25	1070

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	W. C. Beckert, Pittsburg, Pa.				
91	Odorless Lawn and Garden Fertilizer.	W. C. Beckert, Allegheny, ----	3.00	.26	5.81
	Berg Co., The, Philadelphia, Pa.				
253	Berg's 5-6-8 Truck Guano, ----------	T. Frank Ream, Palmyra, ----	3.90	4.44	3.07
2..	†Berg's S. B. M. Standard Bone	T. Frank Ream, Palmyra, ----			
58.	Manure.	B. R. Watson & Son, Embreeville.	7.83	4.86	3.42
650		C. L. Shipman, Hughesville,--			
12..	†Berg's $25 Bone Mnure, ----------	Solomon J. Pusey, West Grove.	6.68	5.42	2.85
1221		A. B. Groff, New Holland, ----			
121		Solomon J. Pusey, West Grove.	10.63	4.16	3.38
1342	†Berg's $35 Potato Manure, --------	T. Frank Ream, Palmyra, ---			
1222	Berg's Tobacco Manure, ----------	A. B. Groff, New Holland, ---	7.81	4.90	3.46
	A. H. Blaker & Co., Fox Chase, Pa.				
946	Blaker's Special Fertilizer for General Use.	A. H. Blake & Co., Fox Chase,	11.98	6.43	2.31
947	Blaker's Special Fertilizer for Potatoes.	A. H. Blake & Co.. Fox Chase.	9.85	5.99	3.27
	Bowker Fertilizer Co., New York.				
549		W. H. Weidensaul, Millmont,--			
358	†Bowker's Corn and Grain Grower,	B. J. Phillips, Centerville, ---	10.40	7.10	2.97
633		J. L. Douds, Beaver, ---------			
353		Kernochan Hdw. Co., Titusville.			
319	†Bowker's Hill and Drill Phosphate,	H. M. Spalding & Son, Troy,	10.68	6.58	2.63
859		Abram Hostetler, Scalp Level,			
907	Bowker's Ideal Potash Compound,--	E. G. Hawkins, Bear Lake, ---	10.88	7.27	3.25
964	Bowker's Lawn and Garden Dressing,	Marshall Bros.. New Castle, --	4.39	.15	5.09
630	†Bowker's Market Garden Fertilizer,	J. I. Douds, Beaver, ---------	7.38	6.04	1.96
1133		J. C. Mattern, Port Matilda,--			
28	Bowker's Potash or Staple Phosphate.	Wm. Steingrobe, Mercer, -----	8.13	7.17	2.32
631	†Potato and Vegetable Fertilizer, --	J. I. Douds, Beaver, ---------	8.64	7.45	2.13
1238		B. F. Fink, Huntingdon, ----			
115		Walter Pierce, East Smithfield			
27	†Bowker's Six Per Cent. Potato	Wm. Steingrobe, Mercer, ----	9.10	4.96	2.06
548	Fertilizer.	W. H. Weidensaul, Millmont,			
550	†Stockbridge's Special Complete Ma-	W. H. Weidensaul, Millmont,	8.80	4.91	1.78
861	nure for Potatoes and Vegetables, No. 1.	Abram Hostetler, Scalp Level,			
320	Stockbridge Special Complete Manure for Top Dressing and for Forcing, No. 3.	H. M. Spalding & Son, Troy,	7.28	2.29	3.23
	S. B. Bredbeck, Bredbecks, Pa.				
766	Special Potato Fertilizer, ----------	B. F. Goodwin, New Freedom,	6.95	3.23	5.18
	Buffalo Fertilizer Co., Buffalo, N. Y.				
1095	Ammoniated Bone Black, ----------	W. W. Juscho, Mansfield, ---	9.82	†3.90	4.26
409		Wallace Sherbine, Willmore, ---			
26	†Celery and Potato Special, --------	H. B. Hoon, Mercer, --------	10.00	†5.46	3.86
662		M. Gillis, Muney, ----------			
966		J. A. Cover, New Castle, -----			
522	†Farmers' Choice, ----------	A. E. Growal, Rockwood, ----	10.50	†5.42	3.82
1179		E. A. Culver, Tidioute, ------			
986		Farmers' Operative Supply Co., Imperial.			
790	†Fish Guano, ----------	King Bros., Uniontown, -----	10.30	†4.86	4.95
1061		J. L. Reese & Co., Millville,--			

†Composite sample. †Soluble guaranteed 8 per cent.
†Soluble guaranteed 9 per cent.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
18.24	24.31	22.00	6.07	-------	2.58	-------	2.58	2.00	2.00	1.65	30.04	43.00	91
4.15	11.66	-------	*7.51	8.00	5.96	-------	5.96	6.00	*3.72	5.00	36.18	40.00	253
3.48	11.76	-------	8.28	8.00	6.64	-------	6.64	6.00	*2.01	3.00	29.49	30.00	254
												30.00	584
												29.00	656
2.89	11.16	-------	8.27	7.00	3.43	-------	3.43	3.00	*1.63	2.00	24.42	25.00	122
												24.00	1221
3.76	11.30	-------	7.54	7.00	9.06	-------	*9.06	10.00	*2.42	3.00	33.21	35.00	121
												32.00	1342
4.21	12.57	-------	8.36	8.00	4.91	-------	*4.91	600	*1.96	3.00	27.92	29.00	1222
.45	9.19	-------	8.74	8.00	2.27	-------	2.27	2.00	1.15	1.03	20.28	24.00	946
.51	9.77	-------	9.26	8.00	8.79	-------	8.79	8.00	1.27	1.03	27.81	29.00	947
												24.00	549
.23	10.30	9.00	10.07	8.00	4.14	-------	4.14	4.00	1.05	.82	22.84	25.00	358
												22.50	633
												32.00	353
1.90	11.11	10.00	9.21	9.00	2.57	-------	2.57	2.00	2.78	2.47	29.20	30.00	319
												25.00	859
1.34	11.86	11.00	10.52	10.00	6.33	-------	6.33	6.00	1.42	1.23	27.61	28.00	907
9.51	14.75	-------	5.24	4.00	4.95	-------	4.95	5.00	3.19	3.29	33.03	50.00	964
1.34	9.34	7.00	8.00	6.00	8.51	-------	*8.51	10.00	*1.85	2.47	29.61	33.00	630
												32.00	1133
.07	10.56	9.00	9.49	8.00	3.56	-------	3.56	3.00	1.13	.82	22.62	23.00	28
.96	10.54	9.00	9.58	8.00	5.01	-------	5.01	4.00	2.62	2.47	30.78	30.09	631
												30.00	1238
												26.00	115
1.17	8.19	7.00	7.02	6.00	5.85	-------	5.85	6.00	1.13	.82	22.66	24.00	27
												24.00	548
.45	7.14	7.00	6.69	6.00	9.54	-------	*9.54	10.00	3.29	3.29	35.62	35.00	550
												33.00	861
1.66	7.18	6.00	5.52	4.00	4.27	2.23	6.50	6.00	5.03	4.93	40.20	42.00	320
2.35	10.76	9.00	8.41	8.00	4.60	-------	4.60	4.00	1.01	.82	22.23	20.00	766
2.96	11.12	-------	8.16	-------	3.02	-------	3.02	2.50	1.58	1.23	23.49	25.00	1095
												------	409
.89	10.21	-------	9.32	-------	9.04	-------	*9.04	10.00	1.51	1.64	29.37	29.50	26
												30.00	662
												23.75	966
2.11	11.35	-------	9.24	-------	4.95	-------	4.95	5.00	.89	.82	22.99	21.75	522
												30.00	1179
												21.00	986
2.08	11.89	-------	9.81	-------	2.18	-------	2.18	2.00	1.12	.82	21.49	22.00	790
												19.00	1061

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric Soluble in water.	Phosphoric Reverted.
1091	Garden Truck,	H. B. Lewis, Mansfield,	9.13	†5.93	3.49
120	†High Grade Manure,	J. M. Campbell, Victoria,	7.28	§4.23	3.36
519		H. L. Pike, Meyersdale,			
518	†Ideal Wheat and Corn,	H. L. Pike, Meyersdale,	8.55	†5.84	4.48
1095		W. W. Juscho, Mansfield,			
859	Special Mixture,	Jacob Keek, Kress,	8.33	§5.19	2.88
540	Vegetable and Potato,	S. L. Egbert, Sandy Lake,	6.33	§5.47	3.07
	Cambria Fertilizer Co., Johnstown, Pa.				
270	†B. & B. Phosphate,	Edw. Maurer, Boswell,	9.38	4.81	3.26
421		Schettig Bros., Ebensburg,			
268	†Corn and Potato Manure,	Edw. Maurer, Boswell,	8.55	4.31	2.92
419		Schettig Bros., Ebensburg,			
	Coe Mortimer Co., The, New York.				
1110	Extra Special Potato Fertilizer and Fruit Grower.	B. F. Zuck, Ephrata,	10.20	6.27	1.77
1109	†E. Frank Coe's Columbian Corn	B. F. Zuck, Ephrata,	7.68	1.20	7.22
1453	and Potato Fertilizer.	Boettinger & Dietz, Danville,			
90	Genuine Peruvian Guano, Lobos Grade.	I. W. Scott & Co., Pittsburg,	6.88	3.81	4.08
1112	†E. Frank Coe's Gold Brand Excel-	B. F. Zuck, Ephrata,	7.39	5.29	2.53
1176	sior Guano.	Boettinger & Dietz, Danville,			
89	Peruvian Grass, Grain, Clover and Fruit Fertilizer.	I. W. Scott & Co., Pittsburg,	2.43	1.94	4.51
1108		B. F. Zuck, Ephrata,			
88	†Peruvian Grass Top Dressing,	I. W. Scott & Co., Pittsburg,	3.95	.08	2.34
1543		Adam P. Smith, Five Points,			
1111		B. F. Zuck, Ephrata,			
87	†Peruvian Vegetable Grower,	I. W. Scott & Co., Pittsburg,	6.45	4.31	3.35
1175		Boettinger & Dietz, Danville,			
	Henry Cope & Co., Lincoln University, Pa.				
1386	Henry Cope & Co.'s Potato and Corn Phosphate.	Wm. K. McClurg, Oxford,	7.38	4.23	3.57
1387	Henry Cope & Co.'s Queen of Elk Valley Phosphate.	Wm. K. McClurg, Oxford,	9.30	4.90	2.70
	Josiah Cope & Co., Baltimore, Md.				
179	†Potato and Tobacco Phosphate,	Jerome Stuft, Stoyestown,	9.85	6.71	3.29
589		Harry Wilson, Frazer,			
	Darling & Co., Chicago, Ill.				
977	Darling's General Crop Brand,	Lucian Bailey, Edenburg,	9.50	3.93	4.60
976	Darling's Sure Winner Brand,	Lucian Bailey, Edenburg,	9.03	4.42	4.13
	Jas. G. Downward Co., The, Coatesville, Pa.				
948	Ammoniated Bone Phosphate,	Isaac Tomlinson, Bethayers,	6.26	5.58	2.64
950	Special Corn Manure,	Isaac Tomlinson, Bethayers,	9.60	5.37	2.36
949	Special Potato Fertilizer,	Isaac Tomlinson, Bethayers,	8.48	5.04	2.19
	Eureka Fertilizer Co. Perryville, Md.				
535	Complete Compound,	F. E. Brown, Lewisburg,	8.13	4.91	3.83
381		D. J. Schoch, Montoursville,			
262	†Corn and Potato Special,	E. S. Urich, Meyerstown,	7.93	4.65	3.76
393		Geo. Wagner, Snedberg,			
536	†Dissolved Animal Bone,	F. E. Brown, Lewisburg,	7.10	4.63	4.25
881		A. N. Witter, Waterfall,			
537	†Grain and Grass Mixture,	F. E. Brown, Lewisburg,	8.18	4.91	3.90
1009		Levi Stober, Kleinfeltersville,			
748	†Imperial Bone Phosphate,	Levi Kaltreider, Red Lion,	8.53	4.33	4.48
936		Levi Stober, Kleinfeltersville,			

†Composite sample.
‡Soluble guaranteed 8 per cent.
‡Soluble guranteed 9 per cent.
§Soluble guaranteed 7 per cent.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
.96	10.38	-------	9.42	-------	4.93	-------	*4.93	7.00	3.70	3.28	35.43	35.00	1091
.97	8.56	-------	7.59	-------	11.00	-------	11.00	10.00	*3.07	3.28	36.88	-------	120
												22.50	519
.43	10.75	-------	10.32	-------	5.68	-------	5.68	5.00	1.69	1.64	27.56	23.50	518
												27.00	1096
.74	8.74	-------	8.00	-------	15.80	-------	15.89	15.00	*2.19	2.46	38.33	33.00	839
1.11	9.65	-------	8.54	-------	6.79	-------	*6.79	7.00	3.22	2.46	34.30	33.00	340
3.28	11.35	8.00	8.07	6.50	1.70	-------	*1.70	2.00	*.84	1.00	18.94	20.00	270
												26.00	421
1.49	8.72	7.00	7.23	6.00	6.97	-------	*6.97	8.00	1.82	1.50	26.98	32.00	268
												30.00	419
.29	*8.33	9.00	8.04	8.00	8.64	-------	*8.64	10.00	1.47	1.65	27.50	29.00	1110
.48	*8.90	9.50	8.42	8.50	2.91	-------	2.91	2.50	1.10	1.23	19.82	23.00	1109
												22.00	1453
5.23	*13.12	14.00	7.89	8.00	2.00	3.67	5.67	4.75	3.11	2.90	34.54	42.00	90
.53	*8.35	9.00	7.82	8.00	7.46	-------	7.46	6.00	2.40	2.47	30.42	31.00	1112
												30.00	1176
4.37	*10.82	12.00	*6.45	7.00	1.20	12.10	13.30	12.00	2.03	1.67	37.23	43.00	89
												62.00	1108
4.12	6.54	6.00	*2.42	4.50	1.60	6.90	8.50	6.00	*8.59	9.00	57.57	65.00	88
												57.00	1243
												43.00	1111
3.55	11.21	10.00	*7.66	8.00	1.33	8.07	9.40	9.00	3.31	3.30	39.14	45.00	87
												40.00	1175
.83	*8.63	9.00	7.80	7.00	5.25	-------	5.25	4.00	1.33	1.25	23.38	24.00	1386
.66	*8.26	9.00	7.60	7.00	7.63	-------	*7.63	8.00	*1.37	1.75	25.64	27.00	1387
1.15	11.15	11.00	10.00	10.00	7.79	-------	7.79	7.00	.99	.82	26.67	24.50	179
												24.00	589
1.85	10.38	10.00	8.53	8.00	7.69	-------	7.69	6.00	.95	.82	25.14	27.00	977
1.90	10.45	10.00	8.55	8.00	3.39	-------	3.39	3.00	1.01	.82	21.06	23.00	976
1.26	9.48	9.00	8.22	7.00	3.72	-------	3.72	3.50	1.02	.85	20.95	24.00	948
1.39	9.12	9.00	*7.73	8.00	4.34	-------	4.34	3.50	*1.36	1.65	22.78	29.00	950
1.67	8.90	8.00	7.23	7.00	6.18	-------	6.18	6.00	1.09	1.24	23.23	28.00	949
1.64	10.38	9.00	8.74	7.00	4.14	-------	*4.14	5.00	.83	.82	21.25	22.00	535
												21.00	381
1.80	*10.21	11.00	*8.41	9.00	3.61	-------	3.61	3.00	.87	.82	20.43	22.00	262
												24.00	393
2.04	*10.92	15.00	*8.88	12.00	3.49	-------	3.49	-------	1.55	1.65	24.02	26.00	533
												30.00	881
1.40	10.21	10.00	8.81	8.00	2.73	-------	2.73	2.00	.78	.82	19.51	20.50	537
												23.00	1009
1.62	10.43	10.00	8.81	8.00	1.38	-------	1.38	1.00	.87	.82	18.43	18.00	748
												22.00	936

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
243	Potato and Vegetable,	L. G. Landis, Ft. Hunter,	6.15	4.02	4.10
935	Eureka Wrapper Leaf,	Levi Stober, Kleinfeltersville,	8.95	5.04	2.62
	Farmers' Fertilizer Works, Elizabethtown.				
563	Animal Bone and Potash,	Addison Landis, Middletown,	10.60	5.42	3.50
1411	Special Compound,	John Sheetz, Elizabethville,	7.20	4.44	3.27
	Farmers' Fertilizer and Feed Co., Westminster, Md.				
676	XX Bone Phosphate,	C. C. Brown, East Berlin,	7.30	8.60	1.44
	W. S. Farmer & Co., Baltimore Md.				
710	W. S. F. & Co.'s Clyde Brand,	A. P. Lippy, Littlestown,	10.28	6.11	2.27
723	W. S. F. & Co.'s Harvest Queen	H. L. Strayer, Nashville,	11.50	6.58	2.89
1400	W. S. F. & Co.'s Potato and Tobacco Phosphate.	C. D. Jacobs, Newport,	9.23	8.08	.20
	Griffith & Boyd, Baltimore, Md.				
435	†Cereal Bone Plaut Food,	J. W. Hostetler, Walnut,	10.75	5.42	2.82
1164		E. D. Tewksbury, Catawissa,			
1118	Double Strength Tobacco Grower,	Bear & Long, Lititz,	10.40	5.55	2.85
249		Hiram L. Bamberger, Lebanon.			
150	†G. & B. Co.'s Farmers' Potato Manure.	N. H. Walker & Co., Kennett Square.	9.12	4.40	4.24
370		S. A. Glosser, Linden,			
272	G. & B. Co.'s Fish Bone and Potash,	——— ———, Belmont,	8.55	4.41	3.86
83		Geo. H. Hegner, Sewickley,			
6	†Fish Bone and Potash,	J. W. Hostetler, Walnut,	7.28	3.23	4.35
132		E. A. and J. L. Pennoek, Chatham.			
273	†G. & B. Co.'s Gilt Edge Crop Guano.	——— ———, Belmont,	8.83	5.29	3.44
457		Focht & Lacey, Geigertown,			
366	G. & B. Co.'s Peerless,	J. H. Nicholas, Avis,	8.28	6.88	3.30
56		S. A. Glosser, Mill Hall,			
5	†Spring Crop Grower,	J. W. Hostetler, Walnut,	9.19	5.13	2.17
84		Geo. H. Hegner, Sewickley,			
1124	†Valley Fertilizer,	E. B. Ruhl & Son, Manheim,	10.15	1.47	6.76
1447		Fred H. Meany, Monaco,			
1125	G. & B. Co.'s Vegetable Bone,	E. B. Ruhl & Son, Manheim,	9.85	5.20	3.23
	S. M. Hess & Bro., Philadelphia, Pa.				
894		Jacob Yohn, Fairview,			
314	†Keystone Bone Phosphate,	W. H. Boughton, Columbia X Roads.	10.25	4.76	3.53
929		H. I. Rhodes, Lembergers,			
171	†Potato and Truck Manure,	D. H. Weaver, Johnstown,	10.33	6.50	2.51
193		Jno. T. Morey, Allentown,			
175		D. H. Weaver, Johnstown,			
14	†Special Compound,	John Seiber, Mifflintown,	9.70	5.43	2.93
425		P. W. Wossam, Love Joy,			
72		Howard Stamm, Rosecrans,			
21	†Special Corn Manure,	John Seiber, Mifflintown,	10.85	5.23	2.91
173		D. H. Weaver, Johnstown,			
174	†Special Potato Manure,	D. H. Weaver, Johnstown,	8.73	6.54	1.54
873		David Price, Everett,			
864		W. G. Hershberger, Geistown.			
65	†Superior Potash Mixture,	H. S. Fague, Picture Rocks,	9.63	6.27	2.03
87		David Price, Everett,			
10	†Tobacco Manure,	John Seiber, Mifflintown,	8.90	5.69	2.38
82		Mack & Baker, Nelson,			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
2.55	10.67	9.00	8.12	8.00	4.77	-------	4.77	4.00	1.80	1.65	25.96	23.00	243
2.14	*9.80	10.00	*7.66	8.00	4.88	-------	*4.88	6.00	*1.90	2.47	26.13	32.00	935
1.19	10.11	-------	8.92	7.00	5.69	-------	5.69	5.00	1.61	1.65	26.22	23.50	563
.89	8.60	-------	7.71	7.00	2.52	-------	2.52	1.00	.88	.82	18.50	18.50	1411
.36	10.40	10.00	10.04	9.00	3.67	-------	3.67	3.00	.82	.82	21.42	19.00	676
1.49	9.87	9.00	8.38	8.00	2.27	-------	2.27	2.00	.99	.82	19.72	20.00	710
1.47	10.94	10.00	9.47	9.00	3.13	-------	3.13	3.00	1.02	1.03	21.87	20.25	723
1.40	9.68	9.00	8.28	8.00	10.17	-------	10.17	10.00	1.72	1.65	31.12	29.00	1400
.94	9.18	9.00	8.24	8.00	2.61	-------	2.61	2.00	.82	.85	18.74	------	435
												19.00	1164
1.85	10.25	9.00	8.40	8.00	3.28	-------	3.28	3.00	*2.20	2.50	26.42	28.00	1118
												26.75	240
1.85	10.49	9.00	8.64	8.00	8.09	-------	*8.09	9.00	1.00	.85	25.92	27.50	150
												30.00	370
2.23	10.50	8.00	8.27	7.00	3.01	-------	3.01	3.00	1.65	1.50	23.53	-------	272
												26.00	83
2.14	9.72	8.00	7.58	7.00	2.96	-------	2.96	3.00	*1.30	1.50	21.10	22.50	6
												25.00	132
1.83	10.56	9.00	8.73	8.00	6.23	-------	*6.23	10.00	2.08	1.65	29.20	------	273
												30.00	457
1.19	11.37	9.00	10.18	8.00	2.56	-------	2.56	-------	.54	.29	17.26	20.00	366
												30.00	56
1.49	8.79	7.50	7.30	6.50	4.85	-------	4.85	4.50	1.48	1.65	23.66	22.00	5
												28.00	84
1.34	9.57	9.00	8.23	8.00	3.26	-------	3.26	3.00	.71	.41	18.62	19.00	1124
												20.00	1417
1.91	10.34	9.00	8.43	8.00	6.30	-------	*6.30	7.00	*2.01	2.47	28.59	30.00	1125
												21.50	894
1.34	9.63	9.00	8.29	8.00	2.17	-------	2.17	1.00	1.23	.80	20.49	20.00	314
												19.00	929
1.26	10.27	10.00	9.01	8.00	6.08	-------	6.08	6.00	2.61	2.40	31.42	31.50	171
												32.00	193
												23.50	175
1.44	9.80	9.00	8.36	8.00	4.02	-------	4.02	4.00	.86	.80	20.72	23.00	14
												22.40	425
1.50	9.64	9.00	8.14	8.00	2.07	-------	2.07	2.00	*1.40	1.60	21.07	20.59	72
												21.00	21
.75	*8.83	10.00	8.08	8.00	7.14	-------	7.14	7.00	3.35	3.20	34.93	22.00	173
												35.00	174
												32.00	873
.89	9.19	9.00	8.30	8.00	10.67	-------	10.67	10.00	1.76	1.60	31.40	30.60	864
												31.00	658
												30.00	874
2.31	10.38	10.00	8.07	8.00	6.66	-------	6.66	6.00	2.75	2.40	32.31	31.00	16
												30.00	826

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted
	Hirsh, Stein & Co., Chicago, Ill.				
1474	Calumet Brand Grain Grower, -------	Chas. T. Wills & Co., Parnassus.	4.60	1.59	5.32
80	Calumet Brand Potato, Tobacco and Onion Grower.	J. A. Auld, Roehester, --------	2.88	2.50	5.20
1473	Calumet Brand Universal Crop Grower.	Chas. T. Wills & Co., Parnassus.	2.15	1.27	4.44
81	Calumet Brand Wheat, Corn and Oats Special.	J. A. Auld, Roehester, --------	2.48	1.08	4.32
	Holmes Seed Co., Harrisburg, Pa.				
1011	Holmes Lawn Dressing, ----------	Holmes Seed Co., Harrisburg,	3.05	.54	3.07
	Hubbard Fertilizer Co., The, Baltimore, Md.				
808	†Hubbard's Columbia Gem Phosphate.	B. F. Horting, Newport, ----	7.08	3.39	5.21
555		John Engle, Hummelstown, ---			
1074		F. A. Slagle, Paxinos, --------			
449	†Hubbard's Jersey Trucker for Sweet and Irish Potatoes.	Chas. E. Seehler, Mifflinburg,	8.05	6.10	2.97
381		John Artley, Muney, ----------			
1315		J. A. Witherspoon, Mereersburg.			
	M. P. Hubbard & Co., Baltimore, Md.				
1015	Hubbard's Fish Bone and Potash, --	J. C. Gill, Meehaniesburg, ----	5.43	5.81	1.84
1016	Hubbard's Old Economy, ----------	J. C. Gill, Meehaniesburg, ----	7.03	6.58	1.95
	Jarecki Chemical Co., The, Sandusky, Ohio.				
514	†Fish Phosphate and Potash Tobaeeo and Potato Food.	James Maust, Elk Liek, -----	9.18	5.44	4.09
351		H. B. Edwards, Titusville, ---			
992		J. W. Robb & Bro., Midway,			
902	†H. G. Guano and Potash, ---------	M. Z. Sherman, East Springfield.	13.35	4.18	4.33
276		Albert Barnett, Ralphton, ----			
991	†Lake Erie Guano with Phosphate and Potash.	J. W. Robb & Bro., Midway,	15.96	5.00	4.40
47		F. L. Beatty, Hadley, --------			
275		Albert Barnett, Ralphton, ----			
348	†Number One Guano with Phosphate and Potash.	Eugene Barnett, Utiea, ------	13.78	5.49	4.22
48		F. L. Beatty, Hadley, --------			
513		James Maust, Elk Liek, ------			
	Keystone Bone Fertilizer Co., Philadelphia, Pa.				
408	†Keystone Grain and Grass Manure,	John A. Kuntz, Lynnport, ----	7.93	3.76	4.03
1106		L. A. Geiger, Joanna, --------			
404	†Keystone Royal Corn and Potato Manure.	H. F. Kistler, Wanamakers, --	9.43	4.02	3.72
463		Wm. Worley, Gouglersville, --			
464	†Keystone Standard Potato Manure,	Wm. Worley, Gouglersville, --	9.95	3.18	4.22
407		John A. Kuntz, Lynnport, --			
1368		W. S. Buekman, Hatboro, ----			
467	Keystone Supreme Potato and Truek Manure.	Wm. Worley, Gouglersville, ---	7.20	3.15	3.64
403	†Keystone 20th Century Special, ----	H. F. Kistler, Wanamakers,--	7.98	2.90	3.24
1431		E. H. Paxon, Schuylkill Haven.			
492	†Keystone Vegetable Guano, ---------	M. C. Dietrieh, Kempton, -----	9.04	2.79	4.50
406		John A. Kuntz, Lynnport, ----			
1369		W. S. Buekman, Hatboro, ----			
	Lancaster Bone Fertilizer Co., Lancaster, Pa.				
1341	Complete Ammoniated Bone Manure.	Chas. Boltz, Grantville, ------	5.08	1.86	5.41
1202	Potato, Tobaeco and Truek Manure.	S. H. Snavely & Son, Manheim,	7.05	2.11	5.57

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
2.23	9.14	9.00	*6.91	8.00	3.36	-------	3.36	2.00	1.76	1.64	22.87	26.00	1474
2.22	9.92	9.00	*7.72	8.00	1.07	4.60	5.67	5.00	1.95	1.64	27.70	28.00	80
1.88	*7.59	8.00	*5.71	7.00	2.00	-------	2.00	1.00	.78	.82	15.94	22.00	1473
2.31	*7.71	9.00	*5.40	8.00	3.77	-------	*3.77	4.00	1.30	.82	19.93	24.00	81
7.97	*11.58	15.00	*3.61	10.00	2.13	7.09	9.22	9.00	*5.00	6.59	44.82	75.00	1011
1.89	10.49	9.75	8.60	8.00	3.36	-------	3.36	2.00	.48	.41	16.56	15.75 16.00 15.00	808 555 1074
2.13	11.20	10.00	9.07	8.00	7.95	-------	*7.95	10.00	1.72	1.65	29.64	26.80 30.00 27.50	449 384 1315
.22	7.87	7.00	7.65	6.00	1.69	-------	1.69	1.00	.36	.21	13.45	13.50	1015
.36	8.89	9.00	8.53	8.00	2.49	-------	2.49	2.00	.80	.41	18.75	16.50	1016
1.77	11.30	9.00	9.53	8.00	3.63	-------	*3.63	4.00	.87	.83	21.51	24.50 24.00 25.00 28.00	514 351 992 992
1.65	10.16	9.00	8.51	8.00	6.93	-------	6.93	7.00	.96	.83	24.26	25.00 29.00	276 991
1.00	10.40	9.00	9.40	8.00	3.07	-------	3.07	2.50	1.32	1.25	22.41	23.00 22.50	47 275
1.34	11.05	9.00	9.71	8.00	2.14	-------	2.14	2.00	1.01	.83	20.61	22.00 21.00 23.00	348 48 513
1.21	9.00	8.00	7.79	7.00	4.15	-------	4.15	1.00	1.13	.82	21.46	18.00	408
1.34	9.08	9.00	*7.74	8.00	10.61	-------	10.61	10.00	2.04	1.65	32.20	17.00 28.00 29.00	1106 404 463
1.32	8.72	7.00	7.40	6.00	9.52	-------	*9.52	10.00	2.35	2.47	32.04	32.00 31.00 31.00	464 407 1368
2.14	8.93	9.00	*6.79	8.00	8.39	-------	8.39	7.00	3.53	3.30	36.28	34.00	467
1.66	7.80	6.00	6.14	5.00	9.37	-------	*9.37	10.00	1.72	1.24	28.00	26.00 26.00	403 1431
1.64	8.93	7.00	7.29	6.00	5.36	-------	*5.36	6.00	1.99	1.65	26.24	26.00 24.00 25.00	492 406 1369
1.71	8.98	9.00	*7.27	8.00	3.12	-------	3.12	2.00	1.23	.82	20.44	21.50	1341
1.78	9.46	9.00	*7.68	8.00	5.35	-------	*5.35	6.00	1.69	1.65	25.16	29.00	1502

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphorie	
				Soluble in water.	Reverted.
747 1203	†Special Guano,	J. Flinchbaugh, Windsorville, S. H. Snavely & Son, Manheim.	5.48	2.77	5.23
746 1204	†Keystone Bone Standard,	J. Flinchbaugh, Windsorville, S. H. Snavely & Son, Manheim.	7.19	3.68	6.45
	Lancaster Chemical Co., Lancaster, Pa.				
1144	No. 2 Lancaster Chemical Dewey Brand.	H. W. Daughenbaugh, Belleville.	9.30	3.44	4.22
214	No. 1 Tobacco and Vegetable Fertilizer.	D. H. Hopkins, Supt., Orefield.	6.06	5.86	3.68
216	Potato Special 2—8—10,	D. H. Hopkins, Supt. Orefield.	4.58	4.86	5.15
	Geo. D. Landis, Treas., Successor to J. Scott Dickey Co., Lancaster, Pa.				
1214	J. S. D. Brand,	Geo. D. Landis, Treas., Gap,	9.81	6.58	2.12
1213	Tobacco and Truck Fertilizer No. 1,	Geo. D. Landis, Treas., Gap,	9.90	5.71	3.97
	D. Levan, Lebanon Fertilizer Works, Lebanon, Pa.				
235 261	†Levan's General Crop Grower,	Ed. Mayberry, Pine Grove, Lebanon Hdw. Co., Lebanon,	5.80	1.59	†6.66
564 388 573	†Levan's Special Corn Fertilizer,	d. Mayberry, Pine Grove, Ed. Mayberry, Pine Grove, C. M. Brandt, Lawn,	7.98	3.44	†5.14
572 240 1328	†Levan's Special Potato and Tobacco Fertilizer.	C. M. Brandt, Lawn, A. H. Hummel, Pine Grove, H. C. Snavely, Cleona,	8.25	4.93	†2.82
255 1327	†Levan's Special Truck Fertilizer,	John Landis, Palmyra, Harry B. Horst, Sunny Side,	7.15	5.52	†1.89
	Lister's Agricultural Chemical Works, Newark, N. J.				
1355 897 1425	†Lister's Corn Fertilizer No. 2,	Frank Pickering, Yardley, Chas. Beckman, Fairview, J. Hunsicker, Leibyville,	11.40	9.13	1.86
307 58 322	†Lister's Corn and Potato Fertilizer,	S. T. Taylor, Schelsburg, Knecht Bros., Parvin, J. R. Jones, East Troy,	11.50	5.30	2.78
183 57 582	†Lister's G. Brand,	C. A. Brandt, Shanksville, Knecht Bros., Parvin, C. M. Sanders, Vicksburg,	10.68	6.04	2.62
725 1495	†Lister's Golden Chaff,	Edward Buff & Co., York, J. L. Erlemeyer, Liverpool,	9.30	4.84	3.70
142	Lister's Grass and Oat Fertilizer,	D. W. Kleckner, Kepner Sta.,	9.00	6.57	2.37
45	Lister's Reliance,	I. E. Moots, Jonestown, Wm. H. Fritz, Berwyn,	8.03	6.17	2.56
56 693	†Lister's Special Crop Producer,	Knecht Bros., Parvin, J. N. Hersh, New Oxford,	9.85	5.74	2.13
65 1330	†Special Potato Fertilizer,	O. P. Bull, Hughesville, C. D. Brandt, Bachmansville,	†1.78	5.65	2.63
1326	Lister's Special 10 per cent. Fertilizer	Isaac Plasterer, Midway,	7.98	4.40	3.90
843 323 954	†Lister's Special 10 per cent. Potato Fertilizer.	Frank Douglass, Indiana, W. A. Smith, Williwanna, A. Irwin, Huntingdon Valley,	9.40	6.59	1.72
325	Lister's Potato No. 2 Fertilizer,	J. R. Jones, East Troy,	8.89	8.99	1.86
590 1296	†Lister's Standard Pure Bone Superphos. of Lime.	Wm. H. Fritz, Berwyn, W. H. Schriver, Dillsburg,	12.00	7.08	3.10
323 1448	†Lister's Success Fertilizer,	J. R. Jones, East Troy A. J. Norris & Bro., Culmerville.	13.08	6.27	2.96

†Composite sample.
‡Reverted guaranteed 8 per cent.
‡Reverted guaranteed 7 per cent.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.18	9.18	8.00	8.00	7.00	4.83	-------	4.83	4.00	1.04	.82	21.76	{23.00 92.00	747 1203
1.79	11.92	11.00	10.13	10.00	2.37	-------	2.37	2.00	.48	.29	16.45	{20.00 19.00	746 1204
1.13	*8.79	9.00	*7.66	8.00	3.01	-------	*3.01	4.00	1.20	1.24	20.32	-------	1144
2.42	11.96	8.50	9.54	7.50	4.93	2.31	7.24	7.00	*1.38	2.06	28.47	30.00	214
1.60	11.61	9.00	10.01	8.00	.67	9.09	*9.76	10.00	1.62	1.65	33.03	26.00	216
.48	*9.18	12.00	*8.70	10.00	3.28	-------	3.28	2.00	1.41	.82	22.50	19.00	1214
1.21	*10.89	12.00	*9.68	10.00	6.11	-------	*6.11	10.00	2.37	2.06	30.75	30.00	1213
1.07	9.32	-------	8.25	-------	1.61	-------	1.61	1.00	*.67	.82	16.63	{15.50 16.00 ------	235 261 564
1.21	9.79	-------	8.58	-------	2.21	-------	2.21	2.00	*.68	.82	18.06	{17.00 18.00 22.00	388 573 572
.64	*8.39	-------	*7.75	-------	6.65	-------	6.65	6.00	*1.28	1.65	24.52	{23.00 ------	240 1328
.36	*7.77	-------	7.41	-------	10.30	-------	10.30	7.00	1.65	1.65	29.48	{28.00 ------	255 1327
.70	11.69	11.00	10.99	10.00	4.06	-------	4.06	4.00	1.97	1.65	28.10	{26.00 26.50 25.00 29.00	1355 897 1425 307
1.96	10.04	9.00	8.08	8.00	3.19	-------	3.19	3.00	1.87	1.65	24.48	{25.00 25.00 18.05	58 322 183
1.08	9.74	9.00	8.66	8.00	4.26	-------	4.26	4.00	.96	.82	21.58	{22.50 26.75	57 532
.82	9.36	9.00	8.54	8.00	2.36	-------	2.36	2.00	.59	.41	17.68	{19.00 17.00	725 1405
1.08	10.02	9.00	8.94	8.00	4.36	-------	4.36	4.00	1.05	.82	22.42	20.50	1426
1.30	10.03	9.00	8.73	8.00	2.37	-------	2.37	2.00	1.06	1.03	20.31	21.00	45
1.06	8.93	8.00	7.87	7.00	1.73	-------	1.73	1.00	.99	.82	18.58	{21.00 20.00 21.00	591 59 693
1.91	10.19	9.00	8.28	8.00	3.47	-------	3.47	3.00	1.88	1.65	25.15	{23.50 22.00	659 1330
1.56	9.86	9.00	8.30	8.00	8.91	-------	*8.91	10.00	1.80	1.65	29.94	29.50	1326
1.22	9.53	9.00	8.31	8.00	10.37	-------	10.37	10.00	1.97	1.65	32.24	{35.00 30.00 32.00	843 333 954
.69	11.54	11.00	10.85	10.00	4.48	-------	4.48	4.00	1.81	1.65	27.74	27.00	325
.89	11.07	10.00	10.18	9.00	2.28	-------	2.28	2.00	2.60	2.47	28.41	{28.00 25.00	590 1296
1.81	11.04	10.00	9.23	9.00	2.45	-------	2.45	2.00	1.47	1.23	22.90	{23.50 24.00	323 1448

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Frederick Ludlam Co., The, New York.				
1254	Ludlam Cecrops Fertilizer Harvest Queen.	Sechrist & Ihrig, York,	9.70	5.30	2.58
1399	Ludlam Cecrops Fertilizer No. 2 for Grain and Grass.	Jacob Fritz, New Bloomfield,	8.85	4.10	2.72
1252	Ludlam Cecrops Fertilizer, Potato and Tobacco.	Seehrist & Ihrig, York,	7.75	4.70	4.06
1255	Ludlam Cecrops Fertilizer, Spring Special.	E. Hoffman, York,	10.68	7.59	2.79
1253	Ludlam Ceerops Fertilizer, Standard Potash.	F. Z. Stauffer, York,	9.05	5.23	2.85
	Mapes Formula and Peruvian Guano Co. New York.				
1082	†The Mapes Average Soil Complete Manure.	H. J. Landrus, Wellsboro,	7.68	1.81	3.19
1120		Muth & Co., Lititz,			
1434	The Mapes Caulillower and Cabbage Manure.	Philip Updegrove, Valley View,	7.10	1.62	3.31
958	†The Mapes Complete Manure, A	John B. Satterthwaite, Woodbourne.	5.75	.84	6.58
1020	rand.	E. W. Rupp, Shiremanstown,			
473	†The Mapes Complete Manure, 10	F. S. Stover, Bowmansville,	5.50	.35	2.55
1081	per cent. Potash.	H. J. Landrus, Wellsboro,			
474	†The Mapes Corn Manure,	F. S. Stover, Bowmansville,	7.53	.61	5.72
1122		Muth & Co., Lititz,			
412		F. S. Stover, Bowmansville.			
198	†The Mapes Economical Potato Ma-	O. P. Helfrich, Slatington,	4.95	.69	2.92
485	nure.	E. M. Zerr, Geigertown,			
1119	†The Mapes General Crop Brand,	Muth & Co., Lititz,			
1540		J. B. Satterthwaite, Woodbourne.	4.65	5.67	.75
1361	†The Mapes Potato Manure,	Henry S. Beidler, Doylestown,	6.60	.69	5.95
1435		Philip Updegrove, Valley View,			
1121	The Mapes Tobacco Starter Improved,	Muth & Co., Lititz,	9.15	.05	5.23
1542	The Mapes Top Dresser Improved,	J. B. Satterthwaite, Woodbourne.	7.55	.10	4.54
1083	The Mapes Vegetable Manure or Complete Manure for Light Soils.	A. R. Niles, Wellsboro,	6.94	.55	5.37
	N. Markel, Seitzland, Pa.				
750	Markel's Electric Phosphate,	D. J. Trout, Stewartstown,	7.15	3.38	6.07
	D. B. Martin Co., Philadelphia, Pa.				
560	†Martin's Claremont Vegetable Grower.	Mumma & Snavely, Middletown.	7.76	4.50	3.82
626		J. H. Thompson, Harmarville,			
397	†Corn and Cereal Special,	A. Wetrig, Schnecksville,	11.45	5.48	2.59
7		D. Sweigert,			
627		J. H. Thompson, Harmarville,			
559	†Martin's Gilt Edge Potato Manure,	Mumma & Snavely, Middletown.	7.40	5.53	1.64
256		A. B. Bomgardner, Palmyra,			
804		A. F. Kimmel, Orwigsburg,			
703	†One, Eight and Four,	A. P. Lippy, Littlestown,	11.08	5.06	2.85
628		J. H. Thompson, Harmarville,			
816		Kipp & Moore, Millerstown,			
561	†Martin's Prize Potato,	Mumma & Snavely, Middletown.	11.04	5.52	2.12
386		John H. Reed, Roedersville,			
625		J. H. Thompson, Harmarville,			
1161	Martin's Sure Grower,	H. B. Low & Son, Orangeville,	12.10	4.27	3.63
	Miller Fertilizer Co., The, Baltimore, Md.				
679	Club Brand,	P. C. Smith, East Berlin,	5.73	4.33	3.89
436	†Farmer's Profit,	S. P. Leyder, Van Dyke,	6.48	4.59	3.66
1385		Miller Harkins, Oxford,			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of sale.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.80	9.74	9.00	7.94	8.00	2.26	-------	2.26	2.00	.88	.82	18.98	19.00	1254
1.42	8.24	8.00	6.82	7.00	1.43	-------	1.43	1.00	.92	.82	16.90	17.50	1399
1.10	9.86	9.00	8.76	8.00	9.40	-------	*9.40	10.00	1.73	1.65	30.42	28.00	1252
1.08	11.46	10.00	10.38	9.00	7.33	-------	7.33	7.00	1.15	.82	27.30	23.00	1255
1.66	9.74	9.00	8.08	8.00	4.26	-------	4.26	4.00	.82	.82	20.61	21.00	1253
3.12	8.12	-------	*5.00	7.00	.93	4.86	5.79	5.00	*3.91	4.12	34.88	-------	1082
												36.00	1120
1.94	6.87	7.00	*4.93	6.00	7.68	-------	7.68	6.00	4.19	4.12	36.66	37.00	1434
5.60	13.02	12.00	*7.42	10.00	3.29	-------	3.29	2.50	2.61	2.47	28.64	36.00	958
												36.00	1020
2.93	5.83	5.00	2.90	3.00	10.45	-------	10.45	10.00	2.21	2.06	28.99	35.00	473
												-------	1081
5.16	11.49	10.00	*6.33	8.00	7.24	-------	7.24	6.00	2.45	2.47	30.85	37.50	474
												35.00	1122
												38.50	472
3.30	6.91	6.00	*3.61	4.00	1.33	7.49	8.82	8.00	3.71	3.29	36.30	39.00	198
												38.00	480
3.88	10.30	10.00	*6.42	8.00	2.92	-------	2.92	2.00	1.73	1.65	23.28	23.00	1119
												28.00	1346
3.19	9.83	9.00	*6.64	8.00	.93	6.75	7.68	6.00	3.67	3.71	37.33	40.00	1361
												38.00	1433
3.34	8.62	8.00	*5.28	6.00	.93	1.73	2.66	1.00	4.62	4.12	34.42	36.00	1121
3.28	7.92	-------	*4.64	8.00	1.60	2.83	4.43	4.00	*9.28	9.88	57.34	55.00	1345
2.65	8.57	8.00	5.92	6.00	1.07	6.87	7.94	6.00	5.15	4.94	43.53	-------	1083
1.37	10.82	10.00	9.45	9.00	2.25	-------	2.25	2.00	.44	.41	15.52	19.00	756
1.59	9.91	-------	8.32	7.00	6.87	-------	6.87	5.00	2.69	2.47	31.98	27.00	560
												31.00	626
												21.00	397
1.62	9.69	-------	8.07	8.00	2.40	-------	2.40	2.00	1.66	1.65	22.60	-------	7
												25.00	627
												31.50	559
1.48	8.65	-------	7.17	7.00	11.38	-------	11.38	10.00	2.89	2.47	36.21	31.00	256
												30.00	804
												22.00	703
1.42	9.33	-------	7.91	8.00	3.87	-------	3.87	4.00	.92	.82	20.37	24.00	628
												20.00	816
												29.00	561
1.44	9.08	-------	*7.64	8.00	9.12	-------	*9.12	10.00	1.80	1.65	29.68	28.50	386
												32.00	625
1.92	9.82	-------	7.90	8.00	2.13	-------	2.13	1.00	.99	.82	19.22	17.00	1161
.77	*8.99	9.50	8.22	8.00	2.29	-------	2.29	2.00	.75	.42	17.98	16.00	679
.83	*9.08	9.50	8.25	8.00	5.03	-------	5.03	5.00	.89	.83	21.55	22.80	436
												20.00	1385

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
712	Harvest Queen,	C. G. Carbaugh, Hanover,	7.64	4.98	3.82
734		Brillinger & Swartz, Emigsville.			
574	†Hustler Phosphate,	S. Baeshore, Fredericksburg,	6.65	4.58	3.42
1383		Miller Harkins, Oxford,			
711	†M. B. S. Fertilizer,	C. G. Carbaugh, Hanover,	5.85	3.51	3.77
1031		John P. Wadel, Shippensburg,			
1394	Pimlico,	A. H. Ulsh, Millerstown,	5.25	4.53	3.55
758	Potato and Vegetable Grower,	S. F. Trout, Stewartstown,	6.40	4.62	3.49
575	W. G. Phosphate,	S. Baeshore, Fredericksburg,	6.08	2.61	4.38
	Nassau Fertilizer Co., New York.				
76	†Common Sense Potato Manure,	W. W. Ingles, New Sheffield,	10.90	6.06	2.36
803		Frank Koenig, Auburn,			
794		W. H. Hoffman, Tripoli,			
731	†General Favorite,	Brillinger & Swartz, Emigsville,	10.38	5.94	2.40
1019		J. H. Koller, Mechanicsburg,			
1420	Gladiator Truck and Potato,	P. Everett, Zions Grove,	10.78	5.58	2.81
619		A. M. McClure, Everett,			
402	†Old Hickory,	J. D. Heintzelman, Wanamakers.	9.85	7.13	2.47
1018		J. H. Koller, Mechanicsburg,			
496		E. D. Greenwalt, Albany,			
401	†Special Potato Fertilizer,	J. D. Heintzelman, Wanamakers.	7.20	5.78	2.51
618		A. M. McClure, Everett,			
1465	Wheat and Grass Grower,	J. T. Kephart, Philipsburg,	4.53	6.37	2.05
	G. Ober & Sons Co., Baltimore, Md.				
1073	Ober's Independent Ammoniated Superphosphate.	A. C. Bobb, Paxinos,	7.68	7.71	1.97
	Oxford Packing Works, Oxford, Pa.				
1381	O. P. W. No. 1,	Wm. Hauser, Oxford,	10.58	5.36	2.17
	Oyler & Spangler, Gettysburg, Pa.				
1271	Gettysburg Fertilizer,	Oyler & Spangler, Gettysburg,	6.23	5.61	4.75
	Patapsco Guano Co., Baltimore, Md.				
455		P. A. Baker, Vicksburg,			
176	†Patapsco Blood, Bone and Potash,	P. J. Blough, Hooversville,	8.57	4.97	3.20
695		J. N. Hersh, New Oxford,			
867	Columbian Guano for Truck, Potatoes and Tobacco.	Francis Baker, Everett,	6.88	5.61	2.53
284		J. J. Lehman, Holsopple,			
246	†Coon Brand Guano,	J. O. S. Burkholder, Hummelstown.	11.15	7.93	1.61
530		P. A. Baker, Vicksburg,			
285		J. J. Lehman, Holsopple,			
247	†Patapsco Corn and Tomato Fertilizer.	J. O. S. Burkholder, Hummelstown.	10.63	5.39	3.22
311		Albert Dively, Bedford,			
624		Francis Baker, Everett,			
517	†Patapsco Early Trucker for Quick	Andrew Rishel, Meyersdale,	8.65	5.99	1.13
727	Growth.	H. P. Kosher, Wrightsville,			
1449	Patapsco Grain and Grass Producer,	W. B. Thom Hdw. Co., Tarentum.	11.28	5.74	2.80
745	Grange Mixture,	J. N. Flinchbaugh, Windsorville.	11.08	5.74	2.73
286		J. J. Lehman, Holsopple,			
248	†Patapsco Tobacco and Potato Fertilizer.	J. O. S. Burkholder, Hummelstown.	11.15	5.78	2.59
312		Albert Dively, Bedford,			

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
.70	*9.50	10.50	*8.80	9.00	3.12	-------	3.12	2.75	1.22	1.03	21.37	21.00 19.00	712 734
.82	*8.82	9.50	8.00	8.00	1.58	-------	1.58	1.00	.94	.83	18.02	16.80 20.00	574 1383
.49	*7.77	8.50	7.28	7.00	3.50	-------	3.50	3.00	.88	.83	18.84	20.00 22.00	711 1031
.54	*8.62	9.50	8.08	8.00	9.76	-------	*9.76	10.00	1.74	1.65	29.90	30.00	1394
.84	*8.95	9.50	8.11	8.00	4.20	-------	*4.20	7.00	*1.73	3.65	24.43	24.00	758
.79	*7.78	8.50	6.99	7.00	1.36	-------	1.36	1.00	.72	.42	15.55	14.25	575
2.12	10.54	9.00	8.42	8.00	4.38	-------	4.38	4.00	1.82	1.65	25.92	24.50 23.00	76 803
1.15	9.49	9.00	8.34	8.00	4.21	-------	4.21	4.00	.87	.82	20.84	21.00 20.00	794 731
1.02	9.41	8.00	8.39	7.00	7.21	-------	7.21	7.00	3.15	3.29	34.32	20.00 34.00	1019 1420
1.40	11.00	11.00	*9.60	10.00	8.76	-------	8.76	8.00	1.26	.82	28.63	28.00 27.00	619 402
.94	9.23	9.00	8.29	8.00	10.57	-------	10.57	10.00	1.73	1.65	31.72	24.00 29.00 28.00	1018 496 401
1.17	9.59	9.00	8.42	8.00	2.58	-------	2.58	2.00	.96	.82	19.81	31.00 25.00	618 1465
1.47	11.15	9.00	9.68	8.00	1.86	-------	1.86	1.00	1.09	.82	21.07	-------	1073
1.42	*8.95	9.81	*7.53	8.00	9.33	-------	*9.33	10.00	*1.05	1.44	26.38	26.00	1381
.96	11.32	9.00	10.36	8.00	4.38	-------	*4.38	5.00	*.63	1.65	19.42	21.00	1271
4.07	9.24	9.00	8.17	8.60	2.60	-------	2.60	2.00	.66	.41	18.01	------ 20.00 18.50	455 176 695
.82	8.96	9.00	8.14	8.00	5.60	-------	5.60	5.00	2.54	2.47	29.65	30.00	867
1.07	10.61	10.00	9.54	9.00	3.09	-------	3.09	3.00	1.05	.82	21.84	21.50 20.00	284 246
2.66	11.27	10.00	*8.61	9.00	2.21	-------	2.21	2.00	1.43	1.23	22.40	20.00 22.00 22.00	530 285 247
1.21	8.33	8.00	7.12	7.00	5.25	-------	5.25	5.00	4.14	4.11	35.98	21.00 35.00 ------ 34.00	311 624 517 727
1.47	10.01	9.00	8.54	8.00	3.90	-------	3.90	4.00	.91	.82	21.06	25.00	1449
1.50	9.97	9.00	8.47	8.00	2.29	-------	2.29	2.00	1.75	1.65	23.24	22.00	745
1.31	9.68	9.00	8.37	8.00	4.18	-------	4.18	4.00	1.87	1.65	25.50	24.00 25.00 23.50	286 248 312

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Pennsylvania Ammonia and Fertilizer Works, Harrisburg, Pa.				
245	†Dauphin Brand,	R. E. Bates, Ft. Hunter,	8.65	5.69	4.09
557		M. D. Ebersole, Middletown,			
242	Dissolved Bone and Potash,	George Hauser, Fort Hunter,	4.60	3.06	4.99
1102	Royal Mixture,	C. F. Gelbach, Duncannon,	6.55	4.25	4.14
244	†Potato Vegetable and Tobacco,	R. E. Bates, Fort Hunter,	9.88	5.94	2.92
558		M. D. Ebersole, Middletown,			
	Pennsylvania Fertilizer Co., The, Buffalo, N. Y.				
614	†Four Fold,	A. M. McClure, Everett,	10.93	‡5.94	4.56
1444		E. E. Wise, New Brighton,			
1443	Truck Manure,	E. E. Wise, New Brighton,	18.27	‡4.21	4.07
1088	Vegetable and Vine,	John Kohler, Mansyeld,	11.55	‡5.80	4.32
	J. D. Perkins, Coatesville, Pa.				
136	Perkins Special Bone Manure,	J. D. Perkins, Coatesville,	8.25	4.33	4.46
	Piedmont Mt. Airy Guano Co., Baltimore, Md.				
1266	Leverings Standard,	H. D. and J. F. Bream, Gettysburg.	8.40	6.27	1.94
1154		W. F. Slagle, Bloomsburg,			
779	†Pennsylvania Grain Grower,	I. P. Crise, Bakersville,	5.35	5.99	1.45
1234		Jno. G. Simpson, Huntingdon.			
1298		C. D. Gillan, Chambersburg,			
1236	†Piedmont Pennsylvania Potato Producer.	Jno. G. Simpson, Huntingdon.	6.83	5.13	1.35
1416		T. W. Rumbel, Ringtown,			
1267	Piedmont Royal Ammoniated Bone and Potash.	H. D. and J. F. Bream, Gettysburg.	6.55	5.80	1.67
1235		Jno. G. Simpson, Huntingdon.			
1463	†Piedmont Success	R. T. Close, Milroy,	5.65	5.10	3.22
	Pittsburg Provision and Packing Co., Pittsburg, Pa.				
77	†Corn and Potato Fertilizer,	Jos. Storer, New Sheffield,	7.10	3.76	3.72
1055		B. Way, Freeport,			
85	Lawn Fertilizer,	Scobie & Parker, Pittsburg,	2.90	1.61	4.15
636	†Speeial Potato Fertilizer,	W. C. Goll, New Shemeld,	6.03	7.71	2.18
1475		Bert Shaw, Mamont,			
	Pollock Fertilizer Co., The, Baltimore, Md.				
1151		H. M. Owen, Lewistown,			
309	†Pollock's Ammoniated Bone Phosphate.	Geo. W. Dibert, Bedford,	10.65	5.93	2.06
1246		J. H. Scott, Petersburg,			
310	Pollock's Crop Invigorator,	D. W. Dibert, Bedford,	8.83	5.49	3.41
1240	Pollock's Owl Brand Guano,	S. H. Beaver, Aitch,	7.40	3.43	3.68
305		L. W. Egolf, Schellsburg,			
20	†Pollock's Superior Corn and Tomato Fertilizer.	W. H. Seiber, McAllisterville,	9.40	5.76	2.42
743		S. A. Borshinger, Red Lion,			
	Ramsburg Fertlizer Co., The, Frederick, Md.				
709	Ammoniated Bone Phosphate,	Nelson Study, Littlestown,	10.60	3.47	6.69
1261	Ramsburg Old Virginia Compound,	Geo. E. Dietrich, York Springs.	8.50	1.78	6.45
1310	Ramsburg Queen,	Franklin Miller & Son, Waynesecastle.	11.45	.11	5.98

†Composite sample.

†Guaranteed soluble 8 per cent.
‡Guaranteed soluble 10 per cent.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.01	*10.79	11.00	*9.78	10.00	2.34	-------	2.34	2.00	1.60	1.24	23.49	-------	245
												21.00	557
3.02	10.98	10.00	*7.96	9.00	5.09	-------	5.09	4.00	1.90	1.65	26.78	30.00	242
2.18	10.57	9.00	8.39	8.00	2.35	-------	2.35	2.00	1.43	.82	22.02	18.00	1402
1.08	9.94	9.50	8.86	8.00	1.60	7.81	9.41	9.00	2.37	2.06	34.78	32.00	244
												31.00	558
2.77	13.27	-------	10.50	-------	2.39	-------	2.39	2.00	*1.32	1.64	23.64	25.00	614
												22.00	1444
.85	9.13	-------	8.28	-------	5.14	-------	*5.14	6.00	1.81	1.64	25.75	28.00	1443
1.61	11.73	-------	10.12	-------	8.02	-------	8.02	8.00	1.06	.82	27.34	28.00	1088
1.02	9.81	-------	8.79	8.00	1.52	-------	1.52	1.00	1.11	.82	19.35	23.00	136
.37	*8.58	9.00	8.21	8.00	4.29	-------	4.29	3.00	1.68	1.65	24.40	23.00	1266
												20.00	1154
.69	8.13	8.00	7.44	7.00	4.67	-------	*4.67	5.00	.72	.82	19.65	21.75	779
												21.00	1234
												27.00	1298
.60	7.08	7.00	6.48	6.00	11.92	-------	11.92	10.00	*1.41	1.65	29.30	28.50	1236
												27.00	1416
.10	7.57	7.00	7.47	6.00	3.78	-------	3.78	3.00	*.83	1.07	19,16	22.50	1267
												19.00	1235
.41	*8.73	10.00	*8.32	9.00	5.33	-------	5.33	5.00	.38	.21	17.77	18.60	1463
1.56	*9.04	11.00	*7.48	9.00	3.41	-------	3.41	3.00	1.73	1.43	23.35	24.00	77
												25.00	1055
8.59	*14.35	16.00	5.76	4.00	1.99	-------	1.99	1.50	2.84	2.87	28.59	40.00	85
1.48	11.37	10.00	9.89	9.00	.80	5.55	*6.35	7.00	2.34	1.64	32.53	28.00	636
												28.00	1475
												25.00	1151
1.71	9.70	9.00	7.99	8.00	2.26	-------	2.26	2.00	1.71	1.65	22.70	20.55	309
												20.80	1246
1.24	10.14	9.00	8.90	8.00	4.09	-------	4.09	4.00	.97	.82	21.66	21.25	310
1.25	8.36	8.00	7.11	7.00	1.84	-------	1.84	1.50	.63	.41	16.23	17.60	1240
												20.00	305
1.68	9.86	9.00	8.18	8.00	2.13	-------	2.13	2.00	1.16	.82	20.19	19.75	20
												20.00	743
2.91	13.10	-------	10.16	10.00	2.02	-------	2.02	2.00	.87	.82	20.67	19.00	709
2.69	10.92	-------	8.23	8.00	3.84	-------	3.84	4.00	.98	.82	21.28	20.00	1261
2.29	15.38	-------	13.09	8.00	.91	-------	.91	1.00	.40	.41	17.12	15.70	1310

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Rasin-Monumental Co., Baltimore, Md.				
551	†Rasin's I. X. L. Fertilizer,	C. B. McCormick, State College.	11.73	6.82	2.41
713		J. D. Markle, Hanover,			
611	†Monumental Potato Manure,	H. F. Gump & Son, Everett,	8.18	3.80	2.53
422		Chas. M. Ackle, Eckenrode Mills.			
714		J. D. Markle, Hanover,			
877	†Rasin's National Crop Compound,	H. G. Diehl Bedford,	10.40	5.61	3.09
433		W. W. Book, Port Royal,			
1155		H. B. Low & Son, Orangeville.			
1157	Rasin's Royal Fish Bone and Potash,	H. B. Low & Son, Orangeville.	8.58	6.06	2.35
862	Rasin's Special Fish and Potash Mixture.	A. Hostetler, Scalp Level,	9.93	3.06	2.59
680	†Rasin's United Grain Grower,	J. C. Leib, East Berlin,	6.55	6.49	2.22
24		W. W. Book, Port Royal,			
1075		E. A. Slogle, Paxinos,			
160	†Rasin's Wheat Corn and Oats Mixture.	S. C. Walker & Co., Chadds Ford Jct.	9.10	5.84	2.38
23		W. W. Book, Port Royal,			
251		Elias S. Brubaeker, Richland,			
159	William Penn Crop Grower,	S. C. Walker & Co., Chadds Ford Jct.	7.00	6.63	2.66
776	Rasin's Vegetable Special,	P. F. Brugh, Bakersville,	6.18	3.24	3.82
604	†Rasin's XXX Fertilizer,	H. G. Diehl, Bedford,	10.15	6.36	2.29
545		Peter Hause, New Columbia,			
1159		H. B. Low & Son, Orangeville.			
	Reading Bone Fertilizer Co., Reading, Pa.				
797	†Reading Bone Special for all Crops,	P. B. Oswald, New Tripoli,	7.18	2.93	4.88
1113		J. D. Sellers, Ephrata,			
1114	†Farmers' Bone and Potash for Corn, Grain and Grass.	J. D. Sellers, Ephrata,	8.25	3.09	5.13
796		P. B. Oswald, New Tripoli,			
1166		E. D. Tewksbury, Catawissa,			
565	†Gilt Edge Potato and Tobacco Grower.	A. M. Brandt, Campbelltown,	7.80	2.68	4.78
462		Katchell & Griffith, Knauers,			
1116		J. D. Sellers, Ephrata,			
925	†Never Fail Crop Grower,	John Wenger, Ono,	8.20	1.57	6.16
576		J. R. Meck, Meckville,			
1205		B. H. Hershey, Manheim,			
461	†Reading Special Potato and Tobacco Grower.	Katchell & Griffith, Knauers,	6.88	1.24	4.99
257		W. H. Boltz, Annville,			
913		J. R. Meck, Meckville,			
932	†Reading Special Grain and Grass Producer.	C. R. Bucher, Reistville,	8.65	2.87	4.78
1460		Samuel Shoup, Roaring Creek,			
1371	Reading Special Sterling Potato Grower.	Reading Bone Fertilizer Co., Plymouth.	7.58	2.42	6.06
207		Meekley & Seissinger, Alburtis,			
1463		Samuel Shoup, Roaring Creek,			
499	†Schuylkill Valley Favorite for Corn and Oats.	Schlegel Adams & Co., Fleetwood.	6.65	.53	5.54
460		Katchell & Griffith, Knauers,			
538		J. W. Painter, Lewisburg,			
931	†Tobacco and Truck Special,	C. R. Bucher, Reistville,	7.40	2.13	4.46
459		Katchell & Griffith, Knauers,			
1115		J. D. Sellers, Ephrata,			
	Robert A. Reichert, Allentown, Pa.				
210	Golden Harvest Phosphate,	H. C. Trexler, Saegersville,	6.30	5.17	2.30
196	Lehigh Potato Manure,	Henry Brown, Laury's,	3.35	4.72	2.32

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.			
1.66	10.89	10.00	9.23	9.00	3.08	-------	3.08	3.00	1.03	.82	21.74	20.90	551
												19.50	713
												29.00	611
1.62	7.95	7.00	6.33	6.00	6.76	-------	*6.76	7.00	1.65	1.65	25.38	30.00	422
												25.00	714
												21.00	877
1.15	9.85	9.00	8.70	8.00	4.16	-------	4.16	4.00	.92	.82	21.27	21.00	433
												19.25	1155
2.31	10.72	9.00	8.41	8.00	3.12	-------	3.12	3.00	1.64	1.65	23.98	21.75	1157
1.34	6.99	7.00	*5.65	6.00	6.27	5.23	11.50	10.00	3.13	3.29	37.20	36.00	862
												26.00	680
1.49	10.20	9.00	8.71	8.00	2.07	-------	2.07	2.00	.97	.82	19.63	20.00	24
												20.00	1075
												19.00	160
1.57	9.79	9.00	8.22	8.00	2.21	-------	2.21	2.00	.51	.41	15.49	17.00	23
												16.56	251
1.90	11.19	9.00	9.29	8.00	1.33	-------	1.33	1.00	1.10	.82	20.32	27.00	159
2.20	9.26	9.00	*7.06	8.00	10.70	-------	10.70	10.00	2.07	1.65	32.04	28.95	776
												24.00	604
1.40	10.05	9.00	8.65	8.00	4.86	-------	4.86	5.00	1.47	1.65	24.66	24.00	545
												23.25	1159
1.66	9.47	8.00	7.81	7.00	5.08	-------	5.08	5.00	1.57	1.65	24.38	24.00	797
												21.50	1113
												18.50	1114
1.66	9.88	9.00	8.22	8.00	4.41	-------	4.41	4.00	.88	.82	21.09	23.00	796
												21.00	1166
												28.00	565
1.40	8.86	8.00	7.46	7.00	10.06	-------	10.06	10.00	1.74	1.65	29.89	32.00	462
												25.00	1116
												18.00	925
1.98	9.71	9.00	*7.73	8.00	1.56	-------	1.56	1.00	.87	.82	17.48	17.50	576
												19.00	1205
												28.00	461
1.96	8.19	7.00	6.23	6.00	7.27	-------	7.27	7.00	1.13	.82	23.37	28.00	257
												22.50	913
1.35	9.00	8.00	7.65	7.00	2.93	-------	2.93	3.00	.85	.82	18.70	18.50	932
												22.00	1160
												28.00	1371
1.59	10.07	9.00	8.48	8.00	9.10	-------	*9.10	10.00	1.02	.82	26.41	27.00	207
												27.00	1461
												18.00	499
4.15	10.22	8.00	*6.07	7.00	2.57	-------	2.57	2.00	.40	.41	14.06	20.00	460
												18.06	538
												27.50	931
1.53	8.12	7.00	6.59	6.00	6.68	-------	6.68	6.00	2.47	2.46	28.94	32.00	459
												25.50	1115
2.12	*9.59	10.00	*7.47	8.00	5.98	-------	5.98	5.00	1.82	1.64	26.66	22.80	210
2.62	*9.66	10.00	*7.04	8.00	11.68	-------	11.68	10.00	2.00	1.64	33.20	27.50	196

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric Soluble in water.	Phosphoric Reverted.
218	Little Giant,	Wm. Fenchel, Rittersville,	7.30	4.46	3.08
195	Peerless Phosphate,	Henry P. Brown, Laury's,	6.50	6.12	3.34
793	Surpass Phosphate,	W.H. Hoffman, New Tripoli,	6.40	3.69	3.17
	Roberts Fertilizer Co., Pittsburg, Pa.				
998	Bone and Potash Fertilizer,	Robinson & Caldwell, Hickory,	8.17	.25	3.74
1000	Complete Potato Fertilizer,	Robinson & Caldwell, Hickory,	11.68	5.84	1.55
999	†Corn and Wheat,	Robinson & Caldwell, Hickory,	9.55	3.79	1.55
1187		Keystone Supply Co., Foxburg,			
1091	General Crop Fertilizer,	Robinson & Caldwell, Hickory.	10.10	.14	.36
	Geo. T. Sale,* Fox Chase, Pa.				
945	Geo. T. Sale Special Manure for all Crops.	Geo. T. Sale, Fox Chase,	6.33	3.40	2.56
	Schaal-Sheldon Fertilizer Co., Erie, Pa.				
1053	Farmers' Favorite,	P. A. Drain, Sarver,	11.70	6.15	2.29
1470	Guano,	Geo. R. Leslie, Arnold,	11.23	5.93	2.39
1471	Schaals Standard,	Geo. R. Leslie, Arnold,	11.43	5.29	3.43
1469	Truckers' Manure,	Geo. R. Leslie, Arnold,	10.10	5.93	2.08
	Scott Fertilizer Co., The, Elkton, Md.				
594	Scott's Corn and Oats Grower,	Wm. C. Holbrook, Ercildown,	10.93	3.70	4.76
959	Scott's Grain Special,	J. P. Satterthwaite, Woodbourne.	9.48	7.57	1.76
259	Scott's Potato Grower,	Elias S. Brubacher, Richland	8.85	6.13	1.72
197	†Scott's Potato and Truck Special,	Calvin Peter, Conlay,	10.23	6.64	2.20
595		Wm. C. Holbrook, Ercildown,			
933	Scott's Standard Phosphate,	Elias S. Brubacher, Richland.	9.20	8.32	1.71
1491	Scott's Sure Growth Compound,	Jos. Guldner, West Penn,	10.43	6.81	2.06
596	†Scott's Sure Growth Superphos-	John R. Mullen, Buck Run,	9.20	6.59	2.78
934	phate.	Elias S. Brubacher, Richland,			
	Chas. A. Sickler & Bro., Wilkes-Barre, Pa.				
1558	Empire Phosphate,	M. McVicar, Hop Bottom,	9.60	.91	3.27
1559	Graves Potato and Tobacco Manure,	M. McVicar, Hop Bottom,	6.00	2.36	3.58
	Smith Agricultural Chem. Co., Columbus, O.				
646	Ohio Farmers' Corn, Oats and Wheat Fertilizer.	J. A. Book, Princeton,	6.08	1.07	6.99
899	Ohio Farmers' Excelsior Guano,	C. C. Kirkland & Son, Girard,	10.43	3.18	5.51
900	Ohio Farmers' Potato and Tobacco Special.	C. C. Kirkland & Son, Girard,	11.43	4.29	4.91
	Swift & Co., Chicago, Ill.				
895	Swifts Onion, Potato and Tobacco Fertilizer.	Chas. Beckman, Fairview,	2.85	3.18	3.35
980	Swifts Pure Champion Wheat and Corn Grower.	R. G. Young, Sons, New Galilee.	4.90	2.68	7.30
896	†Swifts Pure Truck Grower,	Chas. Beckman, Fairview,	3.50	4.10	3.96
1033		P. H. Saxman, Latrobe,			
	I. P. Thomas & Sons Co., Philadelphia, Pa.				
439	Farmers' Choice Bone Phosphate,	R. H. Shaffer, Fichfield,	6.95	6.40	2.40
36	Normal Bone Phosphate,	Wm. J. Moyer, Greenville,	8.78	6.63	2.58
570		E. S. Riser, Lawn,			
39	†Potato Fertilizer,	Wm. J. Moyer, Greenville,	11.98	6.64	1.83
893		Eugene Weidler, Fairview,			
318	Special Potato Manure,	Compton & Lilly, Troy,	8.70	6.01	1.92
454	Tip Top Raw Bone Superphosphate,	John K. Young, Cowan,	7.75	6.18	1.46

†Composite sample.
*Manufactured for by Bowker Fertilizer Company.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
	Total.		Available.				Total						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
2.84	10.38	9.00	7.54	7.00	1.75	-------	1.75	1.00	.99	.82	18.99	18.00	218
2.02	11.48	10.00	9.46	8.00	4.5	-------	4.56	4.00	.90	.82	22.83	19.50	195
2.92	*9.78	10.00	*6.86	8.00	2.50	-------	2.50	2.00	1.60	1.64	21.88	22.00	793
8.28	*12.27	15.00	3.99	-------	2.69	-------	2.69	2.00	2.09	1.50	24.09	27.00	998
.59	7.98	8.00	7.39	7.00	1.07	2.08	3.15	2.00	1.34	1.50	21.48	26.00	1009
.06	*5.40	6.00	5.34	5.00	5.60	-------	5.60	5.00	1.21	1.00	20.56	26.00	999
												28.00	1187
9.06	9.56	8.00	.50	-------	2.89	-------	2.89	2.60	1.38	1.50	18.54	22.00	1001
.98	6.94	7.00	5.96	5.00	6.63	-------	6.63	6.00	2.55	2.25	28.70	30.00	945
1.78	10.22	9.00	8.44	8.00	3.28	-------	3.28	2.00	1.91	.82	25.11	21.00	1053
1.98	10.30	9.00	8.32	8.00	3.63	-------	*3.63	4.00	1.03	.82	21.57	22.00	1470
1.80	10.52	9.00	8.72	8.00	2.85	-------	2.85	2.00	1.52	1.65	22.95	25.00	1471
1.63	9.64	9.00	8.01	8.00	5.71	-------	*5.71	6.00	2.36	2.47	29.18	31.00	1469
1.13	9.59	-------	8.46	8.00	2.96	-------	2.96	2.00	.57	.41	16.09	19.59	594
.51	9.84	-------	9.33	8.00	4.53	-------	4.53	4.00	.80	.41	21.70	22.00	959
.80	8.64	-------	7.84	6.00	11.47	-------	11.47	10.00	1.89	1.65	32.46	26.84	250
1.33	10.17	-------	8.84	7.00	4.92	-------	4.92	5.00	2.07	1.65	27.61	25.00	197
												26.00	595
1.33	11.60	-------	10.27	8.00	4.40	-------	4.40	4.00	.97	.82	23.54	20.84	933
2.09	10.96	-------	8.87	7.00	7.14	-------	7.14	7.00	3.23	3.30	35.78	------	1424
2.00	11.28	-------	9.28	8.00	3.76	-------	3.76	3.00	1.76	1.65	25.76	23.00	596
												22.84	934
1.43	*5.71	9.00	*4.28	8.00	2.14	-------	1.65	15.99	21.00	1558	2.14	2.00	*1.09
2.24	8.18	-------	5.94	6.00	4.45	-------	*4.45	5.00	*.91	1.24	19.40	28.00	1559
1.45	9.51	9.00	8.06	8.00	2.12	-------	2.12	2.00	1.05	1.23	18.92	22.00	646
1.31	10.00	9.00	8.69	8.00	7.21	-------	7.21	7.00	.85	.82	23.94	26.50	899
1.29	10.49	9.00	9.20	8.00	4.27	-------	4.27	4.00	1.49	1.64	24.44	25.50	900
4.15	10.68	10.00	*6.53	8.00	.40	6.41	6.81	7.00	1.63	1.65	27.90	28.00	895
1.87	*11.85	14.00	*9.98	12.00	3.20	-------	3.20	2.00	1.79	1.65	25.48	28.00	980
2.22	10.28	9.00	8.06	8.00	.53	3.23	*3.76	4.00	.88	.82	21.26	23.00	896
												26.00	1033
1.16	*9.96	10.50	*8.80	9.50	2.74	-------	2.74	2.00	1.50	1.65	22.76	25.00	439
.87	10.08	9.50	9.21	8.50	2.19	-------	2.19	1.50	.90	1.03	19.72	20.00	36
												24.50	570
1.08	*9.55	10.00	*8.47	9.00	5.66	-------	*5.66	6.00	2.14	1.65	28.41	27.00	39
												28.00	893
1.48	9.41	8.00	7.93	7.00	10.40	-------	10.40	10.00	1.79	1.65	31.29	30.00	318
.77	*8.41	9.00	*7.64	8.00	4.31	-------	4.31	4.00	2.51	2.47	27.73	27.50	454

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
40	Truckers' High Grade Guano,	Wm. J. Moyer, Greenville,	5.60	6.22	1.63
317	†Thomas' Wheat and Corn Fertilizer.	Compton & Lilly, Troy,	9.90	6.60	2.40
34		Wm. J. Moyer, Greenville,			
438		R. H. Shaffer, Richfield,			
1099	†Victor Potash Manure,	D. Irvin & Son, Ogdensburg,	9.39	4.39	3.51
221		O. H. Cressman, Shoenersville,			
1260		D. F. Stitzel, York Springs,			
	James Thomas, Williamsport, Pa.				
372	Thomas Potato and Truck Manure,	Jos. Thomas, Linden,	8.80	5.05	2.82
368	†Thomas Standard Bone Phosphate.	Jos. Thomas, Larrys Creek,	11.63	3.81	4.37
1101		T. S. Green, Canton,			
	Trenton Fertilizer Co., The, Trenton, N. J.				
940	Trenton Corn Mixture,	L. A. Howells, Morrisville,	6.90	3.25	4.63
939	Trenton Empire Potato Manure,	L. A. Howells, Morrisville,	9.04	6.25	1.89
937	Trenton H. G. Potato Fertilizer,	L. A. Howells, Morrisville,	9.50	5.27	2.22
938	Trenton Special Corn Manure,	L. A. Howells, Morrisville,	9.05	5.78	2.09
	D. J. Trout, for Stewartstown, Pa.				
757	Trout's All Crop Compound,	D. J. Trout, Stewartstown,	8.75	6.53	2.47
759	Trout's Jersey Trucker Compound,	D. J. Trout, Stewartstown,	8.80	4.92	2.68
	F. W. Tunnell & Co., Philadelphia, Pa.				
146	†F. W. Tunnell & Co.'s, Ammoniated Dissolved Bone and Potash.	Wilson & Mendenhall, Toughkennamon.	6.80	1.84	5.30
264		N. R. Yost, Meyerstown,			
203	Truckers' H. G. Fish Guano,	Wm. M. Gehman, Macungie,	7.53	2.91	2.61
201	†F. W. T. & Co.'s, No. 1 Special Potato Manure.	Wm. M. Gehman, Macungie,	10.52	2.79	3.69
147		Wilson & Mendenhall, Toughkennamon.			
263		N. R. Yost, Meyerstown,			
583		B. R. Watson & Son, Embreeville.			
204	†Potato and Grain Manure	Wm. M. Gehman, Macungie,	10.00	2.80	4.41
1432		Frank Rubert, Cressona,			
202	Re-Sieved Phosphate,	Wm. M. Gehman, Macungie,	6.80	4.60	3.61
585	F. W. T. & Co.'s Royal Fish Guano,	B. R. Watson & Son, Embreeville.	10.70	2.28	5.44
148	F. W. T. & Co.'s Sweet and White Potato Manure.	Wilson & Mendenhall, Toughkennamon.	7.30	3.21	4.20
	Tuscarora Fertilizer Co., Baltimore, Md.				
970	Ammoniated Phosphate,	C. W. Book, Pulaski,	7.95	5.21	1.98
971	†Fruit and Potato	C. W. Book, Pulaski,	8.47	6.41	1.28
373		Frank Sholder, Williamsport,			
1142		H. T. McDowell, Howard,			
382	†Sure Growth,	Daniel Webster, Muney,	7.86	6.54	1.59
581		B. R. Watson, Embreeville,			
539	†Tuscarora Big Four,	John Wingert, Lewisburg,	5.88	3.90	2.70
582		B. R. Watson, Embreeville,			
1143	Tuscarora York State Special,	H. T. McDowell, Howard,	8.50	5.49	2.40
	J. E. Tygert Co., The, Philadelphia, Pa.				
1356	Tygert's Gold Edge Potato Guano,	J. E. Harrold, Wrightstown,	11.00	5.02	2.31
482	Tygert's Golden Harvest,	Geo. K. Linderman, White Bear.	8.33	4.33	3.92
491	Tygert's Popular Phosphate,	M. C. Dietrich, Kempton,	6.83	2.80	5.13
490	Tygert's Potato Fertilizer,	M. C. Dietrich Kempton,	7.60	2.49	4.54
481	Tygert's Special Potato and Tobacco Fertilizer.	Geo. K. Linderman, White Bear.	7.88	3.91	2.31

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
	Total.		Available.				Total.						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
.50	8.35	8.00	7.85	7.00	7.82	-------	7.82	7.00	3.42	3.30	35.44	34.00	40
												24.00	317
1.18	10.18	10.00	9.00	9.00	3.11	-------	3.11	3.00	.94	.82	20.83	22.00	34
												21.00	438
												22.00	1099
1.49	9.39	9.00	7.90	8.00	5.03	-------	5.03	5.00	.99	.82	21.99	21.00	221
												22.00	1260
1.68	*9.55	12.00	7.87	8.00	6.69	-------	6.69	5.00	1.96	1.65	28.15	28.00	372
.55	*8.73	11.00	8.18	8.00	1.29	-------	1.29	1.00	.85	.82	17.22	20.00	368
												21.00	1101
6.17	14.05	-------	7.88	7.00	4.41	-------	4.41	3.00	*1.15	1.65	24.12	27.00	940
1.34	9.48	-------	8.14	8.00	10.81	-------	10.81	10.00	2.60	2.47	35.52	34.00	939
1.20	8.69	-------	7.49	6.00	9.64	-------	*9.64	10.00	3.37	3.30	37.03	36.00	937
1.98	9.85	-------	7.87	8.00	3.42	-------	3.42	3.00	1.92	1.65	24.80	25.00	938
1.17	10.17	-------	9.00	6.00	2.70	-------	*2.70	6.00	*1.36	1.65	22.22	23.00	757
1.49	9.09	-------	*7.60	8.00	8.99	-------	*6.99	10.00	1.71	1.65	26.98	27.00	759
												20.50	146
1.73	*8.87	10.00	*7.14	9.00	2.96	-------	2.96	2.00	.73	.21	17.88		
												19.00	264
2.04	7.56	6.00	5.52	5.00	2.83	-------	2.83	1.75	*3.92	4.12	31.04	32.00	203
												32.00	201
2.55	9.03	9.00	*6.48	8.00	8.95	-------	*8.95	10.00	2.31	2.47	31.04	32.50	147
												32.00	263
												27.00	583
1.81	9.02	8.00	7.21	7.00	4.32	-------	4.32	4.00	1.73	1.65	24.02	26.00	204
												27.00	1432
1.15	9.36	7.00	8.21	6.00	4.28	-------	4.28	1.00	1.05	.41	21.57	19.00	202
1.68	9.40	8.00	7.72	7.00	3.63	-------	3.63	3.00	1.77	1.85	23.68	27.00	585
2.15	9.56	8.00	7.41	7.00	9.98	-------	9.98	8.00	1.66	1.65	29.76	30.50	148
.94	8.13	8.00	7.19	7.00	1.48	-------	1.48	1.00	.86	.82	16.94	22.00	970
												32.00	971
.79	*8.48	9.00	*7.69	8.00	10.25	-------	10.25	10.00	1.51	1.64	29.31	26.00	373
												28.00	1142
.22	8.35	8.50	8.13	8.00	3.16	-------	3.16	3.00	.45	.41	15.81	15.00	382
												20.00	581
1.21	7.81	8.00	*6.60	7.00	4.72	-------	4.72	4.00	1.54	1.64	22.86	22.50	539
												25.00	582
.77	*8.66	9.00	7.89	8.00	4.02	-------	4.02	4.00	*.65	.82	19.10	20.00	1143
.41	*7.74	8.00	7.33	7.00	5.27	-------	5.27	5.00	2.02	1.65	25.80	28.00	1356
.89	9.14	9.00	8.25	8.00	2.35	-------	2.35	2.00	.64	.41	17.65	19.00	482
1.63	9.56	8.00	7.93	7.00	1.43	-------	1.43	1.00	.92	.82	17.77	19.00	491
.77	7.80	7.00	7.03	6.00	3.36	-------	*3.36	5.00	1.19	.82	19.88	22.00	490
.78	7.00	7.00	6.22	6.00	8.65	-------	8.65	8.00	3.71	3.29	36.15	34.00	481

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
489 1357	†Tygert's Victor Bone and Potash,	M. C. Dietrich, Kempton, J. E. Harrold, Wrightstown,	10.63	5.94	2.76
	Union Chemical Works, North Wales, Pa.				
232	Complete Superphosphate,	Harry Keefer, Pine Grove,	7.78	4.32	3.56
1366	Farmers' Special,	Isaac Warner, Horsham,	10.38	4.08	3.76
231 1367	†Grain and Grass Grower,	Harry Keefer, Pine Grove, Isaac Warner, Horsham,	10.70	5.21	3.33
1365	High Grade Vegetable Guano,	Isaac Warner, Horsham,	9.00	5.33	1.98
488 1364	†Potato and Celery Special,	M. C. Dietrich, Kempton, Isaac Warner, Horsham,	8.10	4.81	2.72
	Virginia Carolina Chem. Co., Richmond, Va.				
812	National Ammoniated Guano,	Geo. D. Robinson, Markleville.	11.50	4.33	3.20
540 688	†V. C. C. Co.'s Prize Potato Manure,	J. J. Kunkle, Winfield, J. C. Birely, New Oxford,	6.73	3.08	3.72
689	V. C. C. Co.'s Standard Crop Grower.	J. C. Birely, New Oxford,	11.08	6.88	3.46
863	V. C. C. Co.'s Standard Tomato Grower.	A. Hostetler, Scalp Level,	7.75	3.23	3.88
	F. K. Walt Co., Reading, Pa.				
1430	Walt's Ammoniated Bone Phosphate,	A. D. Super, Schuylkill Haven,	12.08	3.50	4.16
501 1428	Walt's Grain and Grass Grower,	F. K. Walt, Fleetwood, A. D. Super, Schuylkill Haven,	9.05	3.60	5.42
466	Walt's H. G. Truck and Vegetable Manure.	Wm. Worley, Gougiersville,	7.80	4.24	2.53
399 465	†Walt's Special Potato Phosphate,	Frank Hoffman, Neffs, Wm. Worley, Gougiersville,	11.33	3.57	4.71
1429	Walt's Sure Growth Phosphate,	A. D. Super, Schuylkill Haven,	9.64	3.35	3.81
	W. E. Whann & Co., Wm. Penn, Pa.				
469	Whann's C. V. Economist Fertilizer,	F. S. Stover, Bowmansville,	4.15	3.06	4.43
470	Whann's C. V. No. 2 Ammoniated Super Phosphate.	F. S. Stover, Bowmansville,	3.93	3.51	4.21
471	Whann's C. V. Special Potato and Truck Fertilizer.	F. S. Stover, Bowmansville,	4.90	3.82	3.39
	Robt. A. Woolridge Co., The, Baltimore, Md.				
141	Wooldridge's Champion Giant Phosphate.	F. G. Evans, Kelton,	8.40	6.32	3.46
139	Wooldridge's Fernwood Grange Mixture.	F. G. Evans, Kelton,	5.95	5.34	3.92
140 12 1026	†Triumph Pure Bone Phosphate,	F. G. Evans, Kelton, W. V. Shirk, Oakland Mills, S. B. Jackson, Carlisle,	10.28	6.15	2.07
742	Wooldridge's Special Potato and Tobacco Fertilizer.	C. A. Rost, Red Lion,	11.18	6.53	2.46
	Wooldridge Fertilizer Co., The, Baltimore, Md.				
1	High Grade Potato and Tomato Grower.	E. Drumun & Co., Mifflintown,	8.63	6.72	2.41
1064	Tiger Bone Stock Phosphate	J. L. Reese & Co., Millville,	6.98	4.53	3.53
	York Chemical Works, York, Pa.				
675 291 1247	†Dempwolf's Ammoniated Raw Bone.	A. G. Smith, Wellsville, Norman G. Miller, Cessna, J. H. Edmiston, Petersburg,	10.08	8.31	3.41
271	Dempwolf's Standard,	D. B. Zimmerman, Ralphton,	11.23	2.61	4.63
290 1152	†Dempwolf's Standard Potash,	Norman G. Miller, Cessna, T. J. Normeyer, Lewistown,	9.08	4.16	3.86

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
	Total.		Available.				Total						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
.66	9.36	9.00	8.70	8.00	4.26	-------	4.26	4.00	.88	.82	21.18	21.00 26.00	489 1357
.71	8.59	8.00	7.88	7.00	1.87	-------	1.87	1.00	.55	.41	16.29	17.00	232
1.39	9.23	9.00	7.84	8.00	4.09	-------	4.09	4.00	.85	.82	20.23	23.50	1366
1.29	9.83	9.00	8.54	8.00	6.04	-------	6.04	6.00	1.64	1.65	26.53	28.00	231
												28.00	1367
2.11	9.42	8.00	7.31	7.00	7.44	-------	7.44	7.00	*2.99	3.30	33.46	35.00	1365
.70	8.23	8.00	7.53	7.00	8.40	2.08	10.48	10.00	1.83	1.65	31.18	25.00 30.00	488 1364
2.42	9.95	9.00	*7.53	8.00	3.82	-------	3.82	4.00	1.02	.82	20.85	22.00	812
1.12	7.92	7.00	6.80	6.00	6.92	-------	6.92	6.00	1.56	1.65	25.12	24.00 24.00	540 688
1.49	11.83	9.00	10.34	8.00	-------	1.79	*1.79	2.00	1.56	1.65	23.88	18.50	689
1.85	8.96	8.00	7.11	7.00	6.12	-------	6.12	5.00	.83	.82	21.75	20.00	863
2.61	10.27	9.00	7.66	7.00	1.88	-------	1.88	1.00	.99	.82	19.00	18.00	1430
2.80	11.82	9.56	9.02	7.56	3.85	-------	3.85	4.00	.80	.82	21.31	19.00 21.00	501 1428
3.93	10.75	9.00	6.82	7.00	9.13	-------	*9.13	10.00	3.11	3.28	36.00	33.00	466
2.37	10.65	9.50	8.28	8.00	8.14	-------	*8.14	10.00	1.56	1.65	28.32	24.50 27.00	190 465
2.58	9.74	8.57	7.16	7.07	2.87	-------	2.87	2.00	.99	.82	19.52	20.00	1429
.32	7.81	-------	*7.49	8.00	2.46	-------	2.46	2.00	.72	.41	16.90	20.00	469
1.85	9.57	-------	7.72	7.00	1.57	-------	3.57	3.00	1.33	1.25	21.96	23.50	470
1.36	8.48	-------	7.12	7.00	7.55	-------	7.55	7.00	2.45	2.47	30.39	32.50	471
1.47	11.19	10.50	9.72	9.00	2.18	-------	2.18	2.00	1.03	.82	21.08	21.00	141
1.08	10.34	9.00	9.26	8.00	8.84	-------	8.84	8.00	1.77	1.65	30.34	26.00	139
												24.00	140
1.43	9.65	9.50	8.22	8.00	4.20	-------	4.20	4.00	1.38	1.23	23.40	21.50	12
												23.25	1026
1.91	10.90	10.50	8.99	9.00	5.22	-------	5.22	5.06	1.79	1.65	27.18	25.00	742
.92	*10.05	10.50	9.13	9.00	5.25	-------	5.25	5.00	2.05	1.65	28.03	-------	1
.96	9.02	9.00	8.06	8.00	5.08	-------	5.08	4.50	1.21	1.03	22.84	22.00	1064
												27.00	675
.79	12.51	11.00	11.72	10.00	.80	3.20	4.00	4.00	1.56	1.65	27.33	25.50	291
												25.75	1247
.85	*8.09	9.00	*7.24	8.00	7.53	-------	7.53	5.00	*1.25	1.65	24.62	-------	271
.29	8.31	8.50	8.02	8.00	4.14	-------	4.14	4.00	.88	.82	20.11	20.75 21.00	290 1152

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
468	†Dempwolf's Potato Manure,	F. S. Stover, Bowmansville,	9.35	3.26	3.41
363		A. T. Baird, Lock Haven,			
503		L. A. Geiger, Joanna,			
597		Highland Grange, Cochranville.			
71	†Dempwolf's Potato and Truck Special.	S. H. Shoemaker, Salona,	7.38	6.12	3.90
683		Berkheimer & Stambaugh, Abbottstown.			
364	Dempwolf's Special Tobacco,	A. T. Baird, Lock Haven,	6.09	4.16	1.72
	Henry S. Zook, Elverson, Pa.				
1148	†No. 5 Pride of Chester Corn, Oats and Wheat Phosphate.	M. K. Stoltzfus, Belleville,	8.75	5.13	4.81
1391		Henry S. Zook, Elverson,			
1392	No. 7 Pride of Chester Dissolved Animal Bone Phosphate for General Use.	Henry S. Zook, Elverson,	8.53	2.52	5.10

†Composite sample.

LIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
	Total.		Available				Total						
Insoluble.	Found.	Guaranteed	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
.41	7.08	6.50	6.67	6.00	7.51	-------	7.51	7.00	.91	.82	22.38	24.00	468
												22.00	363
												22.00	503
												28.00	597
.71	10.73	9.00	10.02	8.00	6.79	-------	*6.79	7.00	*2.24	2.47	31.11	32.00	7
												30.00	683
.60	6.48	5.50	5.88	5.00	1.07	9.13	10.20	10.00	3.45	3.30	37.93	35.50	364
2.22	12.16	11.00	9.94	10.00	2.44	-------	2.44	2.00	.57	.41	17.10	19.50	1148
												18.00	1391
1.59	9.21	9.00	*7.62	8.00	5.17	-------	*5.17	6.00	*1.29	1.65	23.04	26.50	1392

*Constituent falls below guaranty.

ROCK AND POTASH

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Phosphoric: Moisture in 100 pounds.	Phosphoric: Soluble in water.	Phosphoric: Reverted.
	Allentown Manufacturing Co., Allentown, Pa.				
209	High Grade Phosphate and Potash,--	H. C. Trexler, Seagersville,----	5.95	10.[illegible]	[illegible].41
	American Agricultural Chemical Co., New York.				
1440	Fruit Tree Invigorator, ----------	S. E. Hood, New Sheffield,--	10.78	8.[illegible]	4.00
282	†High Grade Bone and Potash, ----	N. Blough, Davidsville, -----	11.60	8.9	3.32
329		H. W. Chaffee, Potterville,--			
1259	Shuler's Bone and Potash. ----------	Wm. Fissel & H. Lawer, Dover.	9.38	5.4[illegible]	2.97
660	Superior Potash Mixture, ----------	F. P. Spring, Lairdsville,-----	8.95	6.9[illegible]	5.43
79	†Bradley's Alkaline Bone with Pot-	Beaver Hdw. Co., Beaver, ----	10.25	7.26	3.51
908	ash.	E. M. Putman, Columbus,----			
520		J. D. Miller, Rockwood, ----			
443	†Canton Chemical Soluble Bone and	W. B. Winey, Middleburg, --	9.60	6.55	3.51
1303	Potash.	Coyle & Dichl, Chambersburg,			
42	†Crocker's Dissolved Bone and Pot-	L. P. Arner, Greenville, -----	9.88	6.72	3.76
43	ash.	J. C. Waters, Jamestown, --			
772		Levi Berkey, Somerset. -----			
236	†Detrick's Soluble Bone Phosphate	Newton Gowder, Boswell. ----	9.53	6.44	3.83
1170	and Potash.	W. H. Adams, Catawissa, --			
187	Great Eastern Soluble Bone and Potash.	Alex. Trent, Coleman, ------	8.45	6.29	4.46
1153	Lazaretto Dissolved Bone and Potash.	E. S. Couser, Snydertown, ---	11.23	5.61	4.62
74	†Lazaretto H. G. Dissolved Bone	S. E. Hood, Shippingport,--	11.85	8.10	3.72
526	and Potash.	Walker & Walker, Glade, ----			
993	Milsom's Dissolved Bone and Potash.	Dunlop Bros., Canonsburg---			
1402		Leechburg Hdw. Co., Leechburg.	10.83	8.10	3.61
1589	Moro Philips Alkaline Bone Phosphate.	I. J. Tustin, Phoenixville, ----	12.20	5.64	4.22
738	†Northwestern Bone and Potash, --	Albert Baker, Emigsville, ----	9.90	7.37	3.41
1181		F. R. Jennings, Tidioute, ----			
1183		S. S. Sigworth, Tionesta, ----			
655	†Northwestern XXX Alkaline Bone,--	C. L. Shipman, Hughesville,--	9.88	6.61	3.92
1285		John King, Gardners Station,-			
1190	Pacific Dissolved Bone and Potash,--	Jos. Brewster, Shippensville,---	8.63	5.93	4.33
283		N. Blough, Davidsville, ------			
110	†Packer's Union Banner Wheat	C. Gerould, Milan, ----------	10.33	5.86	3.80
885	Grower.	C. E. Starr, Three Springs,--			
1547	Reese's Grass and Grain, ----------	The Ohio Pyle Co., Ohio Pyle	12.10	8.66	3.62
68		Jos. C. Hayes, Mackeyville,--			
1258	†Reese's Wheat Special, ----------	Wm. Fissel & H. Laurer, Dover.	9.65	5.74	4.89
921	†Reese's High Grade Potash Mixture,	A. G. Houtz, Mt. Zion, -----	10.15	8.90	3.52
1249		J. F. Goodling, Logansville,--			
51	Susquehanna H. G. Bone and Potash,	J. N. Getz Co., Lock Haven,-	9.10	8.49	4.88
1291	Zell's Dissolved Bone Phosphate and Potash.	O. F. Arnold, Dillsburg, ------	7.18	8.18	3.47
19	†Zell's Electric Phosphate, ----------	W. V. Shirk, Oakland Mills,--	9.33	7.17	3.27
1239		Jos. Blair, Huntingdon, ------			
	American Fertilizer Co., Baltimore, Md.				
279	American Formula Wheat and Corn,	N. Blough, Holsopple, -------	7.99	5.48	4.74
281	Dissolved Bone and Potash. ---------	N. Blough, Holsopple, -------	7.68	7.33	2.99
149	American Special Superphosphate,----	Wilson & Mendenhall, Toughkennamon.	4.73	2.68	3.15

†Composite sample.

FERTILIZERS.

Acid and Potash.

Acid in 100 Pounds.					Potash in 100 Pounds.						
	Total		Available.				Total.				
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
1.05	14.83	13.00	13.78	12.00	.53	6.99	7.52	6.00	23.91	19.00	209
1.72	14.13	11.00	12.41	10.00	2.66	-------	*2.66	8.00	16.69	20.50	1440
.92	13.22	13.00	12.30	12.00	5.39	-------	5.39	5.00	19.23	20.50	282
										20.00	329
.85	9.24	9.00	8.39	8.00	5.29	-------	5.29	2.00	17.46	14.00	1259
1.07	*13.45	14.00	*12.38	13.00	4.38	-------	*4.38	6.00	17.97	20.00	660
1.24	11.95	11.00	10.71	10.00	2.47	-------	2.47	2.00	15.07	18.00	79
										17.50	908
										16.00	520
1.04	11.10	11.00	10.06	10.00	2.13	-------	2.13	2.00	14.19	14.50	443
										13.75	1303
1.19	11.67	11.00	10.48	10.00	2.53	-------	2.53	2.00	14.92	18.00	42
										17.00	43
										15.00	772
1.31	11.58	11.00	10.27	10.00	2.23	-------	2.23	2.00	14.50	15.00	266
										16.00	1170
.70	11.45	11.00	10.75	10.00	2.60	-------	2.60	2.00	14.90	15.00	187
.87	11.10	11.00	10.23	10.00	2.24	-------	2.24	2.00	14.17	15.00	1153
1.24	13.06	13.00	11.82	12.00	5.27	-------	5.27	5.00	18.75	20.00	74
										19.00	526
1.03	12.74	11.00	11.71	10.00	4.71	-------	.471	2.00	18.07	20.00	993
										20.00	1042
.92	10.78	11.00	9.86	10.00	2.23	-------	2.23	2.00	13.98	16.00	1389
.69	11.47	11.00	10.78	10.00	3.04	-------	3.04	2.00	15.54	15.00	738
										19.00	1181
										21.00	1183
.69	11.22	11.00	10.53	10.00	5.25	-------	5.25	5.00	17.49	19.00	655
										18.00	1285
.45	*10.71	11.00	10.26	10.00	2.02	-------	2.02	2.00	13.83	18.00	1190
										16.00	283
1.57	11.23	11.00	*9.66	10.00	2.31	-------	2.31	2.00	14.17	15.50	110
										16.50	885
1.80	14.08	11.00	12.28	10.00	1.67	-------	*1.67	2.00	15.67	20.00	1547
.77	11.40	11.00	10.63	10.00	2.27	-------	2.27	2.00	14.40	15.50	68
										15.00	1258
.85	13.27	12.00	12.42	12.00	5.21	-------	5.21	5.00	19.06	19.00	921
										17.00	1249
1.05	14.42	13.00	13.37	12.00	4.77	-------	5.77	5.00	20.20	23.00	51
1.62	13.27	12.00	11.65	11.00	2.49	-------	2.49	2.00	16.00	15.50	1291
.77	11.21	11.00	10.44	10.00	2.47	-------	2.47	2.00	14.74	15.00	19
										------	1231
1.88	12.10	11.00	10.22	10.00	5.15	-------	5.15	5.00	17.48	18.00	279
1.20	11.43	11.00	10.23	10.00	2.50	-------	2.50	2.00	14.86	16.00	281
.89	*6.72	7.00	5.83	6.00	3.29	-------	3.29	3.00	12.06	14.50	149

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Armour Fertilizer Works, Baltimore, Md.				
97	†Banner Brand,	Lott Shoemaker,	8.05	6.37	3.70
930		J. H. Frank, Harpers,			
1041	†Armour's Phosphate and Potash No. 1.	H. S. Steele, Apollo,	7.88	7.27	2.60
718		D. M. Frey & Sheffer, Hanover.			
1137		McCalmont & Co., Bellefonte,			
577	†Armour's Phosphate and Potash No. 2.	S. Hoffman, Chadds Ford,	7.78	5.55	2.42
73		Wm. Roseberg, New Sheffield,			
769		H. C. Beerits & Sons, Somerset.			
1300	Armour's Sure Crop,	Coyle & Diehl, Chambersburg,	7.08	7.79	1.10
	Atlantic Fertilizer Co., The, Baltimore, Md.				
1276	Atlantic High Grade Bone and Potash.	Biglerville Warehouse Co., Biglerville.	10.30	6.30	5.84
154	†Jumbo Crop Grower	R. A. Richards & Co., Mendenhall.	3.43	1.19	7.27
765		B. F. Goodwin, New Freedom,			
	Baltimore Fertilizer Co., Baltimore, Md.				
1263	Honest A. K. Bone,	J. N. Lightner, Gettysburg,	13.50	6.95	4.55
	Baltimore Pulverizing Co., Baltimore, Md.				
1006	Penniman's Excelsior Fertilizer,	J. M. Allison, Hookstown,	10.25	3.57	7.18
1007	Special Spring Mixture,	J. M. Allison, Hookstown,	6.85	1.53	7.20
	Baugh & Sons Co., Philadelphia, Pa.				
131	†Baugh's Soluble Alkaline Superphosphate.	E. A. & J. L. Peunock, Chatham.	8.58	4.33	5.73
61		E. H. Hayes, Mill Hall,			
274		John S. Rhoads, Ralphton,			
100	Baugh's 10x8 Phosphate and Potash,	Orwell Farmers' Club, Orwell,	6.46	1.90	8.28
101	†Baugh's 12x5 Phosphate and Potash.	Orwell Farmers' Club, Orwell,	8.40	4.68	6.17
1280		Biglerville Warehouse Co., Biglerville.			
	Bowker Fertilizer Co., New York.				
352	†Bowker's Empire State Bone and Potash.	Kernochan Hdw. Co., Titusville.	7.88	4.59	4.25
335		S. L. Woodward,			
632		J. I. Donds, Beaver,			
330	Bowker's Golden Harvest Fertilizer,	P. H. Taylor, Rome,	7.03	9.61	2.18
	Buffalo Fertilizer Co., Buffalo, N. Y.				
178	†Bone and Potash,	L. A. Myers, Hooversville,	11.73	‡6.66	4.09
25		H. B. Hoon, Mercer,			
451	†Extra Bone and Potash,	John Close, Mifflinburg,	10.00	‡‡4.21	5.76
341		S. L. Egbert, Sandy Lake,			
524	†General Crop,	A. E. Growal, Rockwood,	11.43	§4.32	5.80
177		L. A. Myers, Hooversdale,			
99		C. Werkeiser & Co., Potterville.			
450		John Close, Mifflinburg,			
	Josiah Cope & Co., Baltimore, Md.				
299	†H. G. Soluble Bone and Potash,	R. C. Smith, Point,	9.63	7.08	3.32
180		Jerome Stuff, Stoyestown,			
303		W. H. Beaver, Schellsburg,			

†Composite sample.
‡Guaranteed soluble 12 per cent.
‡‡Guaranteed soluble 10 per cent.
§Guaranteed soluble 9 per cent.

FERTILIZERS—Contined.

Acid in 100 Pounds.					Potash in 100 Pounds.						
	Total.		Available.				Total.				
Insoluble.	Found.	Guaranteed	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 ounds at point of selection.	Sample number.
.54	*10.61	11.00	10.07	10.00	8.01	-------	8.01	8.00	19.94	20.00	97
										19.50	930
.20	*10.07	11.00	9.87	10.00	2.24	-------	2.24	†	13.98	19.00	1041
										14.00	718
										16.00	1137
.23	*8.20	9.00	7.97	8.00	5.28	-------	5.28	5.00	15.68	18.00	577
										20.00	73
.15	9.04	8.50	8.89	8.00	4.30	-------	*4.30	5.00	15.60	17.50	769
										15.00	1300
.56	12.70	-------	12.14	12.00	7.10	-------	7.10	5.00	20.29	19.00	1276
.85	9.31	-------	8.46	8.00	5.99	-------	5.99	5.00	16.12	18.00	154
										15.00	765
1.14	12.64	-------	11.50	8.00	2.66	-------	*2.66	3.00	15.68	15.50	1263
2.04	12.79	-------	10.75	10.00	1.96	-------	*1.96	2.60	14.23	17.00	1006
2.04	10.77	-------	8.73	8.00	2.01	-------	2.01	1.00	12.68	14.50	1007
										15.50	131
1.43	11.49	-------	10.06	10.00	2.58	-------	2.58	2.00	14.41	15.50	61
										15.75	274
2.10	12.28	-------	10.18	10.00	7.88	-------	7.88	8.00	19.69	18.00	100
2.37	13.22	-------	*10.85	12.00	5.77	-------	5.77	5.00	18.49	16.44	101
										19.00	1280
										20.00	352
.92	9.76	9.00	8.84	8.00	3.01	-------	3.01	3.00	13.93	17.20	335
										17.00	632
1.43	13.22	13.00	*11.79	12.00	6.34	-------	6.34	5.00	20.19	20.00	330
										20.00	178
.85	11.60	-------	*10.75	-------	7.04	-------	7.04	5.00	19.54	19.50	25
										16.00	451
1.34	11.31	-------	9.97	-------	6.64	-------	*6.64	8.00	18.40	24.00	341
										20.00	524
										18.00	177
.57	10.69	-------	10.12	-------	2.87	-------	2.87	3.00	14.38	15.78	99
										13.40	450
										17.10	299
.64	11.04	11.00	10.40	10.00	5.08	-------	5.08	5.00	17.37	17.70	180
										16.40	303

*Constituent falls below guaranty.
†No guarantee for potash filed.

Sample number.	Manufaeturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Eureka Fertilizer Co., Perryville, Md.				
533	Alkaline Bone and Potash,	F. E. Brown, Lewishurg,	9.55	1.60	7.57
1068	Five Per Cent. Alkaline Bone and Potash.	Chas. Schmucker, Milton,	11.48	7.50	3.95
	W. S. Farmer & Co., Baltimore, Md.				
706	†W. S. F. & Co.'s B. & P. Phosphate.	A. P. Lippy, Littlestown,	9.35	6.29	4.01
511		P. J. Cover & Son, Meyersdale,			
787		W. R. MeCartney, Farmington.			
722	W. S. F. & Co.'s Empire Alkaline Bone.	H. L. Strayer, Nashville,	9.03	6.22	4.00
	Griffith & Boyd, Baltimore, Md.				
546	G. & B. Co.'s Gem Phosphate,	Adam Kling, Allenwood,	7.10	2.49	4.86
1071	†G. & B. Co.'s XX Potash Manure,	Adam King, Watsontown,	10.88	7.31	3.67
1039		M. W. Hunter, Livermore,			
1295		J. B. Spera, Dillshurg,			
	S. M. Hess & Bro., Philadelphia, Pa.				
602	†Emperor Phosphate,	U. G. Diehl, Bedford,	9.43	5.34	4.66
172		D. H. Weaver, Johnstown,			
663		D. W. MeCarty, Muney,			
926	Soluble Bone and Potash,	Adam Yeagley, Llekdale,	12.10	4.65	5.88
657	†Standard Alkaline,	H. S. Fague, Pieture Roeks,	8.29	5.00	3.77
601		U. G. Diehl, Bedford,			
1490		Roht. Armstrong, Petershurg,			
	Home Fertilizer and Chemical Co., Baltimore, Md.				
767	Home Bone and Potash,	Peter Ruhl, New Freedom,	6.73	3.92	7.12
	Hubbard Fertilizer Co., The, Baltimore, Md.				
60	†Hubbard's Bone and Potash for Corn, Wheat and Grass.	G. W. Esenwine, Mill Hall.	10.13	5.12	6.27
1409		J. A. Romberger, Elizabethville.			
755	†Huhhards Corn and Buekwheat,	D. J. Trout, Stewartstown,	5.83	1.28	6.39
1318		J. A. Witherspoon, Mereershurg.			
	Jarecki Chemical Co., The, Sandusky, Ohic.				
515	Superphosphate and Potash,	James Maust, Elk Llek,	5.28	4.24	7.21
	Lancaster Chemical Co., The, Lancaster, Pa.				
1032	†Economist Fertilizer No. 10,	J. P. Wadel, Shippenshurg,	10.15	4.84	4.97
1551		H. F. Palmer, Canton,			
1017	†Phosphoric Acid and Potash Speeial No. 16.	J. C. Gill, Meehanieshurg,	12.63	5.11	4.93
1552		H. F. Palmer, Canton,			
	D. Levan, Lebanon Fertilizer Works, Lebanon, Pa.				
236	Levan's Soluhle Bone and Potash,	Ed. Mayberry, Pine Grove,	3.65	2.80	7.30
	Listers Agricultural Chemical Works, Newark, N. J.				
324	†Listers Animal Bone and Potash,	J. R. Jones, East Troy,	9.19	6.16	2.92
853		G. W. Martin & Co., Saltshurg.			
987	†Atlas Brand Bone and Potash,	Farmers' Cooperative Supply Co., Imperial.	12.90	10.73	2.25
1147		Sol Peachy, Belleville,			
1084	Listers Bone and Potash,	Geo. M. Spalding, Wellsboro,	9.00	2.65	5.34

†Composite sample.

FERTILIZERS—Contined.

Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total		Available.				Total.				
Insoluble.	Found.	Guaranteed	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.			
1.04	*10.21	12.00	*9.17	10.00	2.35	-------	2.35	2.00	12.97	15.00	533
1.15	*12.00	13.00	*11.45	12.00	4.04	-------	*4.04	5.00	17.18	18.00	1068
.83	11.13	11.00	10.30	10.00	2.34	-------	2.34	2.00	14.43	15.00 18.00	706 511
.70	10.92	11.00	10.22	10.00	5.37	-------	5.37	5.00	17.34	16.50 16.50	787 722
1.69	9.04	7.50	7.35	6.50	3.85	-------	3.85	3.00	13.81	14.00	546
1.08	12.06	11.00	10.98	10.00	5.23	-------	5.23	5.00	18.04	15.50 19.00 17.50	1071 1039 1295
.69	*10.69	12.00	10.00	10.00	1.26	-------	1.26	1.00	12.90	13.50 15.50	602 172
.38	*10.91	12.00	10.53	10.00	2.30	-------	2.30	2.00	14.05	14.50 16.25	663 926
.43	9.20	9.00	8.77	8.00	5.23	-------	5.23	5.00	16.08	17.00 15.50 16.00	657 601 1490
.46	11.50	11.00	11.04	10.00	5.40	-------	5.40	5.00	17.42	15.70	767
1.91	13.30	11.75	11.39	10.00	2.77	-------	2.77	2.00	15.67	15.00 14.00	60 1409
.90	8.57	7.50	7.67	6.00	2.51	-------	3.51	3.00	13.11	16.00 12.50	755 1318
1.95	13.40	11.00	11.45	10.00	4.45	-------	4.45	4.00	17.28	21.00	515
1.19	11.00	11.00	9.81	10.00	2.94	-------	2.94	2.00	14.60	14.50	1032
1.19	11.23	11.00	10.04	10.00	6.94	-------	*6.94	8.00	18.88	14.25 19.00 ------	1551 1017 1552
.96	11.06	11.00	10.10	10.00	5.17	-------	3.17	2.00	14.53	14.00	236
1.08	10.16	10.00	9.08	9.00	5.17	-------	5.17	5.00	16.59	22.70 22.00	324 853
.45	13.43	13.00	12.98	12.00	5.53	-------	5.53	5.00	19.98	19.00	987
1.05	9.04	9.00	7.99	8.00	5.00	-------	5.00	5.00	15.16	18.80 18.00	1147 1084

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Frederick Ludlam Co., The, Baltimore, Md.				
744	Ludlam Cerops Fertilizer On Top,	Wm. Overdorff, Windsorville,	9.38	6.88	2.94
	D. B. Martin Co., Philadelphia, Pa.				
1003	No. 3 Potash and Soluble Bone,	A. E. Walker, Burgettstown,	11.98	9.25	1.82
	Miller Fertilizer Co., The, Baltimore, Md.				
1217	Buyers Mixture,	J. G. Walker & Sons Co., Gap,	7.88	2.50	8.66
1382	†Clineh Phosphate,	Miller Harkins, Oxford,	8.88	5.36	5.14
1393		A. H. Ulch, Millerstown,			
	Nassau Fertilizer Co., New York.				
732	†Grass and Grain Fertilizer,	Brillinger & Swartz, Emigsville.	10.50	6.37	4.05
1467		J. F. Kephart, Philipsburg,			
498		J. J. Heffner & Son, Kutztown,			
494	†Nassau Ten and Eight Special,	E. D. Greenawalt, Albany,	8.85	7.53	3.09
617		E. D. Greenawalt, Albany,			
495	Royal Mixture,	A. M. McClure, Everett,	5.46	3.89	4.38
	Pennsylvania Ammonia and Fertilizer Works Harrisburg, Pa.				
1021	Acid Phosphate and Potash,	E. W. Rupp, Shiremanstown,	5.18	1.22	6.96
	Pennsylvania Fertilizer Co., The, Buffalo, N. Y.				
182	†Grain and Grass,	Edward Frazier, Shanksville,	12.03	†5.77	4.42
1062		J. L. Reese & Co., Millville,			
	J. D. Perkins, Coatesville, Pa.				
134	Perkins Globe Phosphate,	J. D. Perkins, Coatesville,	8.92	3.56	6.58
	Piedmont-Mt. Airy Guano Co., Baltimore, Md.				
1417	Levering's I. X. L. Crop Grower,	F. W. Rumbel, Ringtown,	9.63	8.99	1.44
653	Insula Guano (for all Crops),	M. Gillis, Hughesville,	6.25	7.97	1.07
1209	Piedmont Soluble Bone and Potash,	H. D. & J. F. Bream, Gettysburg.	7.45	6.57	1.41
	Pittsburg Provision and Packing Co., Pittsburg, Pa.				
1195	Phosphate and Potash,	H. Collner & Bro., St. Petersburg.	8.43	6.67	3.20
	Pollock Fertilizer Co., Baltimore, Md.				
304	Pollock's Soluble Bone Phosphate,	L. W. Egolf, Schellsburg,	8.23	7.34	3.20
223	Pollocks Sun Guano,	Adam H. Bortz, Wesconsville,	7.40	7.16	3.18
	Ramsburg Fertilizer Co., The, Frederick, Md.				
1309	Ramsburg Alkaline Phosphate,	Franklin Miller & Son, Waynecastle.	12.80	1.47	9.07
708	Special Rock and Potash,	Nelson Study, Littlestown,	11.75	5.04	7.26
	Rasin-Monumental Co., Baltimore, Md.				
552	†Rasin's Bone and Potash Fertilizer,	C. B. McCormick, State College.	9.22	6.50	3.28
308		A. C. Richards, Schellsburg,			
612		H. F. Gump & Son, Everett,			
487	†Rasin's Special Bone and Potash,	M. C. Dietrich, Kempton,	9.93	6.50	3.61
446		Saml. Miller, Penns Creek,			
610		H. G. Gump & Son, Everett,			
306	†Rasin's Special Formula for Corn and Buckwheat.	A. C. Richards, Schellsburg,	6.55	3.24	3.45
152		W. H. Walker & Co., Kennett Square.			
447		Saml. Miller, Penns Creek,			

†Composite sample.
†Guaranteed soluble 10 per cent.

FERTILIZERS—Contined.

Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total.		Available.				Total.				
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed	Present as muriate.	Present as sulfate.	Found.	Guaranteed.			
.97	*10.79	11.00	9.82	10.00	6.59	-------	6.59	6.00	18.60	20.00	744
.17	11.24	-------	*11.07	12.00	6.08	-------	6.08	5.00	19.02	26.00	1003
.79	11.95	11.50	11.16	10.00	4 69	-------	*4.69	5.00	16.64	17.00	1217
.28	*10.78	11.50	10.50	10.00	2.31	-------	2.31	2.00	14.13	15.00	1382
										15.00	1393
.75	11.17	11.00	10.42	10.00	2.23	-------	2.23	2.00	14.36	18.00	732
										20.00	1467
.79	11.41	11.00	10.62	10.00	8.10	-------	8.10	8.00	20.67	22.00	498
										22.00	494
.60	8.87	9.00	8.27	8.00	6.07	-------	6.07	5.00	16.45	23.00	617
										17.00	495
1.85	*10.03	11.00	*8.18	10.00	5.86	-------	3.86	3.00	14.14	16.50	1021
.93	11.13	-------	10.20	-------	2.87	-------	2.87	2.00	14.82	------	182
										14.00	1062
1.22	11.36	-------	10.14	10.00	2.22	-------	2.22	2.00	13.81	17.00	134
.05	*10.48	11.00	10.43	10.00	2.71	-------	*2.71	3.00	15.08	17.00	1417
.22	9.26	8.00	9.01	7.00	2.11	-------	2.11	†2.00	13.50	17.00	653
.03	*8.01	9.00	7.98	8.00	2.44	-------	2.44	2.00	12.87	14.50	1269
.19	10.06	10.00	9.87	9.00	2.49	-------	2.49	2.00	14.13	27.00	1195
.89	11.43	11.00	10.54	10.00	2.21	-------	2.21	2.00	14.62	14.50	304
.64	10.98	11.00	10.34	10.00	8.22	-------	8.22	6.00	20.50	18.00	223
2.24	12.78	-------	10.54	10.00	2.44	-------	2.44	2.00	14.32	13.75	1309
1.82	14.12	-------	12.30	10.00	4.18	-------	*4.18	5.00	17.62	17.00	708
										14.90	552
1.04	10.82	11.00	*9.78	10.00	2.22	-------	2.22	2.00	14.06	13.75	308
										16.00	612
1.15	11.26	11.00	10.11	10.00	5.12	-------	5.12	5.00	17.26	18.00	487
										15.75	416
										18.50	610
.64	7.33	7.00	6.69	6.00	5.07	-------	3.07	3.00	12.36	14.00	306
										15.00	152
										12.35	447

*Constituent falls below guaranty.
†Also guaranteed .41 per cent. nitrogen, found .32 per cent.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	Reading Bone Fertilizer Co., Reading, Pa.				
1275	Soluble Bone and Potash,	Pat Bower, Table Rock,	9.30	.43	9.16
	Steininger Bros.,* Middleburg, Pa.				
441	Grain and Grass,	Steininger Bros., Middleburg,	4.73	2.90	3.73
440	Special Mixture,	Steininger Bros., Middleburg,	3.80	3.60	3.50
	Nelson Study, (for) Littlestown, Pa.				
707	Study's Bone and Potash	Nelson Study, Littlestown,	10.48	3.28	7.18
	I. P. Thomas & Sons Co., Philadelphia, Pa.				
444	†Alkaline Bone,	R. H. Shaffer, Richfield,	9.81	5.25	3.58
37		Wm. J. Moyer, Greenville,			
500		Frank Schaeffer, Fleetwood,			
143	†Special Alkaline Bone,	Frank Kirk, Kelton,	9.63	4.67	4.55
38		Wm. J. Moyer, Greenville,			
445		R. H. Shaffer, Richfield,			
437	†Special Corn Fertilizer,	R. H. Shaffer, Richfield,	8.75	6.95	3.18
35		Wm. J. Moyer, Greenville,			
640		J. P. Wilson, Elwood,			
453	†Thomas' Square Deal Fertilizer,	John K. Young, Cowan,	7.75	3.72	4.54
222		O. H. Cressman, Shoenersville,			
1025		M. Zinn, Carlisle,			
	F. W. Tunnell & Co., Philadelphia, Pa.				
206	Gehman's Special,	Wm. M. Gehman, Macungie,	7.90	10.79	2.26
	Tuscarora Fertilizer Co., Baltimore, Md.				
977	Alkaline,	C. W. Book, Pulaski,	10.70	6.96	3.09
	J. E. Tygert Co., The, Philadelphia, Pa.				
1257	Tygert's Soluble Bone and Potash	Geo. F. Metzler, Dover,	10.95	6.44	3.75
	Union Chemical Works, North Wales, Pa.				
233	Superphosphate and Potash for Potatoes.	Harry Keefer, Pine Grove,	7.20	5.26	2.66
	Virginia-Carolina Chemical Co., Richmond, Va.				
542	†V. C. C. Co.'s Corn and Buckwheat Special.	I. J. Kunkel, Winfield,	5.50	2.79	3.89
1225		Chas. E. Huston & Bro., Three Springs.			
691	V. C. C. Co.'s Double Bone and Potash.	J. C. Birely, New Oxford,	8.88	4.36	3.86
544	†V. C. C. Co.'s Giant Bone and Potash.	I. J. Kunkel, Winfield,	9.78	8.48	4.17
1496		Geo. D. Grazier, Warriors Mark.			
692	†V. C. C. Co.'s Peerless Bone and Potash.	J. C. Birely, New Oxford,	7.21	5.72	2.90
543		I. J. Kunkel, Winfield,			
1226		Chas. E. Huston & Bro., Three Springs.			
690	V. C. C. Co's Special Potash Mixture,	J. C. Birely, New Oxford,	9.66	4.28	3.39
	Robert A. Wooldridge Co., Baltimore, Md.				
17	No. 2 Bone and Potash 8x5.	W. V. Shirk, Oakland Mills,	4.58	6.37	2.41
667	†Wooldridge's German Potash Mixture.	Harry Smith, Turbotville,	9.95	7.08	3.16
11		W. V. Shirk, Oakland Mills,			
928		W. F. Kreiser, Lickdale,			

†Composite sample.
*Manufactured for by York Chemical Works.

FERTILIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total		Available.				Total.				
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.			
2.42	12.01	11.00	*9.59	10.00	2.52	-------	2.52	2.00	13.66	14.05	1275
.36	6.99	7.00	6.63	6.00	3.85	-------	3.85	3.00	12.98	15.00	441
.25	7.35	7.00	7.10	6.00	5.40	-------	3.40	3.00	12.37	13.00	440
1.71	12.17	11.00	10.46	10.00	3.77	-------	3.77	3.00	15.72	16.00	707
1.98	10.81	11.00	*8.83	10.00	2.60	-------	2.60	2.00	14.01	------	444
										16.00	37
										15.00	500
										17.00	143
1.99	11.21	11.00	*9.22	10.00	3.81	-------	3.81	4.00	15.36	18.00	38
										------	445
										21.00	437
.94	11.07	11.00	10.13	10.00	6.52	-------	6.52	6.50	18.70	22.00	35
										22.00	640
										15.40	453
1.29	*9.55	10.00	*8.26	9.00	3.46	-------	3.46	3.00	15.21	15.00	222
										18.00	1025
.57	*13.62	14.00	13.05	13.00	6.03	-------	6.03	6.00	20.55	20.00	206
.10	*10.15	11.00	10.05	10.00	5.02	-------	5.02	5.00	16.82	21.00	973
.84	11.03	11.00	10.19	10.00	2.42	-------	2.42	2.00	14.44	15.50	1257
.89	8.81	9.00	7.92	8.00	10.27	-------	10.27	10.00	20.86	22.00	233
.36	7.04	7.00	6.68	6.00	3.13	-------	3.13	3.00	12.27	12.50	542
										14.50	1225
1.05	9.27	9.00	8.22	8.00	4.09	-------	4.09	4.00	14.68	15.00	691
.78	13.43	13.00	12.65	12.00	6.64	-------	6.64	6.00	20.60	18.00	544
										20.50	1496
.61	9.23	9.00	8.62	8.00	2.47	-------	2.47	2.00	13.34	13.00	692
										12.50	543
										15.00	1226
1.60	9.27	9.00	*7.67	8.00	5.09	-------	5.09	5.00	15.54	15.00	690
.69	9.47	9.00	8.78	8.00	5.61	-------	5.61	5.00	16.76	16.50	17
										14.00	667
.74	10.98	11.00	10.24	10.00	2 39	-------	2.39	2.00	14.56	15.00	11
										16.00	928

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds	Phosphoric	
				Soluble in water.	Reverted.
10	Wooldridge's Ideal Grain and Grass Producer.	W. V. Shirk, Oakland Mills,--	5.28	4.30	5.63
668 1339	†Wooldridge's No. 1 Bone and Potash 6 3 for Wheat, Corn and Oats.	Harry Smith, Turbotville, ---- J. E. Seyfert, Lebanon, -------	6.75	1.96	4.90
	Wooldridge Fertilizer Co., The, Baltimore, Md.				
181	Virginia Belle, ----------	J. Lambert, Lambertville, ----	5.70	6.67	4.38
	York Chemical Works, York, Pa.				
719	Dempwolf's Black Cross, ----------	D. M. Frey & Sheffer, Hanover,	9.10	5.74	4.47
504 296	Dempwolf's Red Cross, ----------	L. A. Geiger, Joanna, ------ Norman G. Miller, Spring Hope.	8.38	5.33	4.30
599 289 69 456	†Dempwolf's Wheat Special, --------	Highland Grange Cochranville, Norman G. Miller, Cessna, -- S. H. Shoemaker, Mackeyville, Peter Renner & Son, Midlinburg,	7.63	5.86	4.17
666 529 686	†Dempwolf's York Special, ----------	Harry Raup, Exchange, ------ Peter Renner & Son, Mifflinburg. Berkheimer & Stambaugh, Abbottstown.	7.06	4.54	3.98

†Composite sample.

FERTILIZERS—Continued.

Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Total		Available.				Total.				
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulfate.	Found.	Guaranteed.			
1.33	11.26	11.00	9.93	10.00	4.68	-------	4.68	4.00	16.42	16.00	10
.33	7.19	7.00	6.86	6.00	3.41	-------	3.41	3.00	12.46	12.65	668
										14.00	1339
.59	*11.64	13.00	*11.05	12.00	3.96	-------	3.96	3.00	16.47	16.50	181
.51	10.72	10.50	10.21	10.00	1.75	-------	*1.75	2.00	13.53	15.50	719
										15.25	504
.83	10.46	10.50	*9.63	10.00	5.28	-------	5.28	5.00	16.86	17.50	296
										15.50	599
										14.75	289
.87	10.90	10.50	10.03	10.00	2.11	-------	2.11	2.00	13.94	14.00	69
										15.00	456
										15.00	666
.61	9.13	8.50	8.52	8.00	4.08	-------	4.08	4.00	14.76	16.00	529
										15.00	686

*Constituent falls below guaranty.

DISSOLVED BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	Baugh & Sons Co., Philadelphia, Pa.	
126	Baugh's Pure Dissolved Animal Bone,	Pennock & Brosius, Avondale,
1292	Baugh's 1¼—10,	Cook, Deardorff & Co., Dillsburg,
	Bowker Fertilizer Co., New York.	
1174	Bowker Ammoniated O. I. O. Phosphate.	J. H. Rose & Co., Riverside,
	D. B. Martin & Co., Philadelphia, Pa.	
96	†Pure Dissolved Animal Bone,	J. H. Thompson, Harmarville,
701		S. P. Lippy, Littlestown.
528	†Martin's Crop Producer,	John Y. Burkman, Somerset,
385		John H. Reed, Roedersville,
562		Mumma & Snavely, Middletown,
	Pittsburg Provision and Packing Co., Pittsburg, Pa.	
1054	†Guano,	B. Way, Freeport,
1540		Geo. L. Moore, Brownsville,
	Pollock Fertilizer Co., The, Baltimore, Md.	
578	†Pollock's Dissolved Animal Bone,	John Hicks, Avondale,
1251		Stayer Bros. & Co., York,
	Reading Bone Fertilizer Co., Reading, Pa.	
1218	Dissolved Animal Bone,	H. W. Sweigart, Gap,

†Composite sample.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.							Nitrogen in 100 Pounds.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Soluble in water.	Reverted.	Insoluble.	Total.		Available.		Found.	Guaranteed.			
				Found.	Guaranteed.	Found.	Guaranteed.					
3.68	6.20	7.17	2.39	15.76	--------	13.37	13.00	2.07	2.06	25.66	28.00	126
9.08	8.96	2.86	2.69	14.51	--------	11.82	10.00	1.14	1.03	20.73	16.00	1292
8.10	6.34	3.26	1.14	*10.74	11.00	*9.60	10.00	.74	.62	16.00	15.50	1174
9.65	9.56	3.59	2.23	15.38	--------	13.15	12.00	1.95	1.65	25.36	28.00	96
											26.00	701
											17.00	528
9.93	6.93	3.47	1.10	11.50	--------	10.40	10.00	1.19	1.03	19.98	17.00	385
											17.00	562
4.15	1.78	4.21	2.49	*8.48	11.00	*5.99	9.00	1.97	1.43	18.55	26.00	1054
											26.00	1540
8.75	8.73	3.09	4.53	16.35	14.00	11.82	12.00	2.02	2.06	25.48	24.50	578
											25.00	1251
8.88	5.72	5.56	1.27	12.55	11.00	11.28	10.00	1.02	.82	18.55	17.00	1218

*Constituent falls below guaranty.

GROUND BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	The American Agricultural Chemical Co., New York.	
165	†Pure Ground Bone,	Wm. C. Ball, Media,
55		J. N. Getz Co., Lock Haven,
648		Farmers' Supply Co., New Castle,
	Armour Fertilizer Works, Chicago, Ill.	
417	†Armour's Bone Meal,	D. J. Davis, Ebensburg,
355		S. S. Bryan, Titusville,
842	†Armour's Raw Bone Meal,	Frank Douglass, Indiana,
418		D. J. Davis, Ebensburg,
424		Chas. M. Ackle, Eckenrode Mills,
	Baugh & Sons Co., Philadelphia, Pa.	
829	Baugh's Raw Bone Meal, Warranted Pure.	L. Plank, Westfield,
	Berg Co., The, Philadelphia, Pa.	
579	†Berg's Raw Bone, Fine,	B. R. Watson, & Son, Embreeville,
123		S. J. Pusey, West Grove,
1224		A. B. Groff, New Holland,
	Bowker Fertilizer Co., New York.	
92	Bowker's Bone Flour,	W. C. Beckert, Allegheny,
	Buffalo Fertilizer Co., New York.	
621	†Bone Meal,	A. M. McClure, Everett,
1487		Eicher & Graft, Scottdale,
	Josiah Cope & Co., Baltimore, Md.	
587	†Pure Ground Raw Bone,	F. E. Bailey, North Brook,
1206		Jones Eavenson, Christiana,
	James G. Downward Co., The, Coatesville, Pa.	
951	Pure Ground Raw Bone,	Isaac Tomlinson, Bethayers,
	Griffith & Boyd, Baltimore, Md.	
82	†*Soft Ground Bone Meal,	Geo. H. Hegner, Sewickley,
153		W. H. Walker & Co., Kennett Square,
	Frank Hartranft, Coatesville, Pa.	
137	Pure Ground Bone,	Preston Powell, West Grove,
	Jarecki Chemical Co., The, Sandusky, Ohio.	
901	Pure Ground Bone,	Daniel Garloch, N. Girard,
	D. B. Martin Co., Philadelphia, Pa.	
145	†Martin's Pure Ground Bone,	Wilson & Mendenhall, Toughkennamon,
704		A. P. Lippy, Littlestown,
1219	Martin's Pure Raw Bone Meal,	J. P. Herman, Gordonville,
	Nassau Fertilizer Co., New York.	
615	†Fine Ground Bone,	A. M. McClure, Everett,
1459		H. E. Kern, Catawissa,
	J. D. Perkins, Coatesville, Pa.	
135	Perkins' Pure Bone Meal,	J. D. Perkins, Coatesville,

†Composite sample.
*Considerable added sulphate present.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
			Phosphoric Acid.		Nitrogen.				
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Found.	Guaranteed.	Found.	Guaranteed.			
5.47	63	37	21.56	20.60	3.52	3.29	30.58	30.00	165
								30.00	55
								35.00	648
2.83	82	18	*23.75	24.00	2.32	2.46	28.44	27.50	417
								32.00	355
								32.00	842
6.50	67	33	23.39	22.00	3.96	3.69	33.67	29.50	418
								28.00	424
6.43	75	25	21.43	21.50	3.79	3.70	32.14	34.00	829
6.48	71	29	22.61	20.00	4.13	2.47	34.05	30.00	579
								29.00	123
								28.00	1224
3.68	92	8	19.04	19.20	3.28	2.06	29.29	40.00	92
3.45	70	30	23.61	22.00	3.03	2.87	30.62	30.00	621
								30.00	1487
6.63	70	30	22.02	20.60	3.86	3.71	32.48	30.00	587
								29.00	1206
4.50	60	40	23.56	20.00	2.85	2.88	29.42	31.00	951
2.40	78	22	12.69	11.00	2.42	2.50	20.96	30.00	82
								26.50	153
6.48	82	18	*21.25	22.00	4.28	3.71	34.20	30.00	137
3.38	80	20	23.94	20.00	2.53	2.50	29.42	28.00	901
2.95	70	30	22.95	22.90	1.73	1.65	25.38	25.50	145
								32.00	704
6.25	48	52	22.82	21.00	3.89	3.71	32.19	30.00	1219
3.71	74	26	24.66	22.80	2.91	2.47	30.98	30.00	615
									1459
3.33	75	25	22.53	22.90	2.26	1.65	27.14	28.00	135

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	Pittsburg Provision and Packing Co., Pittsburg, Pa.	
997	Crescent Butchers' Ground Bone,	R. M. Allison, Hickory,
93	No. 1 Pure Raw Bone Meal,	W. C. Beckert, Allegheny,
86	Pure Raw Bone Meal,	Scobie & Parker, Pittsburg,
	Scott Fertilizer Co., The, Elkton, Md.	
1347	Scott's Pure Ground Raw Bone,	J. B. Satterthwaite, Woodbourne,
	Smith Agricultural Chemical Co., Columbus, O.	
647	Bone Meal,	J. A. Boak, Princeton,
	Tuscarora Fertilizer Co., Baltimore, Md.	
374	Animal Bone,	Frank Sholder, Linden,
	Emil Wahl, Philadelphia, Pa.	
144	Warranted Pure Philadelphia Button Bone Dust.	Wilson & Mendenhall, Toughkennamon,
	York Chemical Works, York, Pa.	
684	Dempwolf's Pure Ground Bone,	Berkheimer & Stambaugh, Abbottstown,

†Composite sample.

FERTILIZERS—Continued.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
			Phosphoric Acid.		Nitrogen.				
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Found.	Guaranteed.	Found.	Guaranteed.			
3.28	75	25	16.02	16.00	3.17	2.46	25.95	30.00	937
4.93	61	39	24.77	22.00	3.84	3.70	33.93	33.00	93
3.03	82	18	*19.08	21.00	4.50	3.70	33.44	30.00	86
6.65	38	62	22.93	21.50	4.02	3.29	32.18	26.00	1347
2.80	69	31	21.99	20.00	1.97	1.65	25.42	29.00	647
2.30	68	32	23.48	24.00	2.86	1.86	29.73	----------	374
6.95	70	30	24.59	24.28	*3.30	3.50	32.22	29.00	144
6.88	79	21	26.23	22.00	*2.93	3.30	32.48	30.50	684

*Constituent falls below guaranty.

ACIDULATED

Furnishing

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	The American Agricultural Chemical Co., New York.	
978	Bradley's Soluble Dissolved Bone,	Geo. Andrews, Enon Valley,
1320	Canton Chemical Bakers' Dissolved S. C. Bone.	E. B. Diehl, Lehmaster,
44	†Crocker's Dissolved Bone Phosphate.	J. E. Waters, Jamestown,
75		S. E. Hood, Shippingport,
1169		W. H. Adams, Catawissa,
1048	†Detrick's Dissolved S. C. Bone,	B. F. Shanon & Co., Butler,
1464		W. T. Hoover, Port Matilda,
859	Maryland Dissolved S. C. Phosphate,	Smith & McKelvey, Blairsville,
739	†Northwestern Acid Phosphate,	Albert Baker, Emigsville,
1184		S. S. Sigworth, Tionesta,
886	†Packer's Union Acidulated Bone,	C. E. Starr, Three Springs,
1527		J. A. C. Rider, Tyrone,
	American Reduction Co., Pittsburg, Pa.	
287	†Acid Phosphate,	John W. Kauffman, Davidsville,
297		Irvin Earnest, Wolfsburg,
	Armour Fertilizer Works, Baltimore, Md.	
431		Frank Douglass, Indiana,
357	†Armour's Cereal Phosphate,	S. S. Beyan, Titusville,
854		Peter Shank, Salix,
604		H. A. Snyder, Exchange,
432	†Armour's Star Phosphate,	Frank Douglass, Indiana,
1008		Stevenson & McDonald, Hookstown,
	Atlantic Fertilizer Co., The, Baltimore, Md.	
155	Atlantic Dissolved Bone Phosphate,	R. A. Richards & Co., Mendenhall,
	Baugh & Sons Co., Philadelphia, Pa.	
124		Pennock & Brosius, Avondale,
62	†Baugh's High Grade Acid Phosphate.	E. H. Hayes, Mill Hall,
721		H. H. Loose, Menges Mills,
125		Pennock & Brosius, Avondale,
102	†Baugh's 16 Per Cent. Acid Phosphate.	Orwell Farmers' Club, Orwell,
525		F. W. Mason, Rockwood,
	Bowker Fertilizer Co., New York.	
1092		B. F. McClure & Bro., Burgettstown,
359	†Bowker's Dissolved Bone Phosphate,	B. J. Phillips, Centerville,
1482		Loucks Hdw. Co., Scottdale,
1557	Bowker's Soluble Bone,	Horace Seamans, Factoryville,
	S. B. Brodbeck, for, Brodbecks, Pa.	
768	Ruth's Dissolved Bone Phosphate,	B. F. Goodwin, New Freedom,
	Buffalo Fertilizer Co., Buffalo, N. Y.	
415		D. J. Davis, Ebensburg,
410	†Soluble Bone,	Wallace Sherbine, Willmore,
651		M. Gillis, Hughesville,
	Josiah Cope & Co., Baltimore, Md.	
586		B. R. Watson & Son, Embreeville,
298	†Cope's Acidulated Bone Phosphate,	B. C. Smith, Point,
813		A. T. Holman, Millertsown,
	Eureka Fertilizer Co., Perryville, Md.	
880	P. & P. Super Phosphate,	A. M. Witter, Hiram,

†Composite sample.

ROCK PHOSPHATE.

Phosphoric Acid.

Moisture in 100 pounds	Phosphoric Acid in 100 Pounds.							Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Soluble in water.	Reverted.	Insoluble.	Total.		Available.				
				Found.	Guaranteed.	Found.	Guaranteed.			
9.28	10.07	6.92	.29	17.28	15.00	16.99	14.00	15.33	16.00	978
3.31	11.46	3.97	.82	16.25	15.00	15.43	14.00	14.82	13.00	1320
7.83	10.51	4.43	1.95	16.89	15.00	14.94	14.00	14.78	15.60	44
									15.00	75
									14.00	1169
7.40	10.33	4.36	.70	15.39	15.00	14.69	14.00	14.14	16.00	1048
									14.00	1464
10.60	9.96	3.94	1.80	15.70	15.00	13.90	14.00	13.99	15.50	850
9.86	10.20	3.56	1.22	14.98	15.00	*13.76	14.00	13.75	15.00	739
									17.00	1184
10.13	11.41	3.53	.84	15.78	15.00	14.94	14.00	14.54	15.50	886
									14.50	1527
7.58	10.48	3.15	.17	*13.80	15.00	*13.63	14.00	13.35	15.0	287
									15.00	297
4.93	8.21	1.85	.33	*10.39	15.00	10.06	10.00	10.84	15.00	431
									16.00	357
									15.00	854
8.30	12.36	1.90	.15	*14.41	15.00	14.26	14.00	14.04	14.00	664
									16.00	432
									15.00	1008
5.00	2.66	11.96	2.11	16.73	--------	14.62	14.00	13.24	14.00	155
9.25	12.06	3.51	1.40	16.97	--------	15.57	14.00	15.20	13.00	124
									15.00	62
									13.50	721
10.55	5.23	10.87	1.30	17.40	--------	16.10	16.00	14.28	14.50	125
									18.00	102
									16.00	525
7.63	6.73	5.50	1.81	14.04	12.00	12.23	11.00	12.42	18.00	1002
									15.00	359
9.74	10.68	3.34	1.66	15.68	15.00	14.02	14.00	14.17	17.00	1482
									16.00	1557
6.65	8.99	5.59	1.75	16.33	15.00	14.58	14.00	14.22	12.00	768
13.70	†9.61	4.52	1.43	15.56	--------	14.13	----------	13.92	15.00	415
									---------	419
									14.00	651
7.00	10.62	3.18	2.21	16.01	15.00	*13.80	14.00	14.18	14.00	586
									14.40	298
									15.00	813
9.73	11.27	4.44	.51	16.22	16.00	15.71	14.00	14.83	16.00	880

*Constituent falls below guaranty. †Guaranteed soluble 14 per cent.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken
	W. S. Farmer & Co., Baltimore, Md.	
510	W. S. F. & Co.'s Dissolved S. C. Bone.	P. J. Cover & Son, Myersdale,
	Hubbard Fertilizer Co., The, Baltimore, Md.	
66	Hubbard's Soluble Bone Phosphate,	Jos. H. Long, Mill Hall,
	Lancaster Chemical Co., The, Lancaster, Pa.	
302	No. 8 Acid Phosphate,	A. Kline, Schellsburg,
	Listers Agricultural Chemical Works, Newark, N. J.	
46	Listers Buyers Choice Acid Phosphate.	H. E. Moats, Jamestown,
	Miller Fertilizer Co., The, Baltimore, Md.	
1384	S. C. Rock,	Miller Harkins, Oxford,
	Pennsylvania Fertilizer Co., The, Buffalo, N. Y.	
1069	†Acid Phosphate,	J.A. Gass, Sunbury,
789		Hogsett & Nankin, Uniontown,
1090		John Kohler, Mansfield,
	Pittsburg Provision and Packing Co., Pittsburg, Pa.	
1468	Acid Phosphate,	B. Way, Freeport,
	Rasin-Monumental Co., The, Baltimore, Md.	
613	†Rasin's Sea Wall Special,	H. F. Gump & Son, Everett,
161		S. C. Walker & Co., Chadds Ford Jct.,
716		J. D. Markle, Hanover,
	Reading Bone Fertilizer Co., Reading, Pa.	
1243	Soluble Dissolved Bone,	D. R. Gregory, Saulsburg,
	Robert A. Reichert, Allentown, Pa.	
219	Acid Phosphate,	Wm. Fenchel, Rittersville,
	J. M. Templin, Honeybrook, Pa.	
301	No. 5 H. G. Acid Phosphate,	A. Kline, Schellsburg,
	I. P. Thomas & Sons Co., Philadelphia, Pa.	
1058	†S. C. Phosphate,	C. R. Henrie & Son, Millville,
888		C. E. Starr, Three Springs,
1307		Greencastle Elevator Co., Greencastle,
	F. W. Tunnell & Co., Philadelphia, Pa.	
205	Dissolved Rock Phosphate,	Wm. M. Gehman, Macungie,
	Tuscarora Fertilizer Co., Baltimore, Md.	
1038	Tuscarora Acid Phosphate,	S. T. Archibald, Livermore,
972	Bone Phosphate,	C. W. Book, Pulaski,

†Composite sample.

PHOSPHATE—Continued.

Moisture in 100 pounds	Phosphoric Acid in 100 Pounds.							Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Soluble in water.	Reverted.	Insoluble.	Total		Available.				
				Found.	Guaranteed.	Found.	Guaranteed.			
4.50	11.41	3.94	.88	16.23	15.00	15.35	14.00	14.79	17.00	510
6.00	13.77	2.83	1.05	17.65	15.75	16.60	14.00	16.03	15.50	66
5.55	1.34	11.41	2.56	15.31	15.00	*12.75	14.00	12.02	13.25	302
6.03	12.98	3.23	.96	17.17	15.00	16.21	14.00	15.61	14.00	46
3.75	9.02	6.35	.45	15.82	-------	15.37	14.00	14.20	12.50	1384
12.00	†8.59	4.36	1.47	14.42	-------	12.95	----------	13.05	15.00 14.00 16.00	1069 789 1090
11.75	7.93	4.47	.57	12.97	12.00	12.40	11.00	12.28	16.00	1468
8.26	8.83	2.34	.51	11.68	11.00	11.17	10.00	11.70	14.00 14.00 12.00	613 161 716
7.05	2.93	8.26	3.28	14.47	13.00	*11.19	12.00	11.64	14.00	1243
5.93	12.69	3.09	1.78	17.56	15.00	15.78	14.00	15.61	14.00	219
6.65	2.37	10.57	2.37	15.31	15.00	*12.94	14.00	12.26	13.25	301
8.60	11.41	3.08	1.28	15.77	15.00	14.49	14.00	14.41	13.50 15.50 13.50	1058 888 1307
2.50	1.67	9.59	2.26	*13.52	15.00	*11.26	14.00	11.06	16.00	205
10.45	12.43	1.36	.29	*14.08	15.00	*13.79	14.00	13.83	14.50	1038
7.39	8.48	1.36	.17	*10.01	11.00	9.84	10.00	10.71	16.00	972

*Constituent falls below guaranty.
†Guaranteed soluble 12 per cent.

Sample number.	Manufacturer and Brand.	From Whom Sample Was	Moisture in 100 pounds.	Phosphoric	
				Soluble in water.	Reverted.
	American Agricultural Chemical Co., New York.				
1304	Muriate of Potash,	Coyle & Diehl, Chambersburg,	.23	------	------
810	Nitrate of Soda,	B. F. Horting, Newport,	.50	------	------
	American Reduction Co., Pittsburg, Pa.				
288	Tankage,	J. W. Kauffman, Davidsville,	2.25	------	------
	Armour Fertilizer Works, The, Baltimore, Md.				
856	Genuine German Kainit,	Peter Shank, Salix,	1.40	------	------
430	Muriate of Potash,	Frank Douglass, Indiana,	.53	------	------
845	Nitrate of Soda,	Frank Douglass, Indiana,	.60	------	------
	Baugh & Sons Co., Philadelphia, Pa.				
1520	Nitrate of Soda,	H. L. Stultz & Bro., Altoona,	.33	------	------
	Jas. Bonday, Jr. & Co., Baltimore, Md.				
705	Old Reliable Brand Genuine Kainit,	A. P. Lippy, Littlestown,	3.40	------	------
	Griffith & Boyd, Baltimore, Md.				
1324	Genuine German Kainit,	S. E. Shenk, Newville,	.85	------	------
	S. M. Hess & Bro., Philadelphia, Pa.				
1335	Nitrate of Soda,	H. K. Hain, Freeport Mills,	2.10	------	------
	Patapsco Guano Co., Baltimore, Md.				
1451	Genuine German Kainit,	W. B. Thom Hdw. Co., Tarentum.	1.75	------	------
	Roberts Fertilizer Co., Pittsburg, Pa.				
1186	Vegetable and Grain,	Keystone Supply Co., Foxburg,	10.50	------	------
	I. P. Thomas & Son Co., Philadelphia, Pa.				
924	Top Dresser for Grass,	Ed. Shuey, Jonestown,	4.35	------	------
	Tuscarora Fertilizer Co., Baltimore. Md.				
383	German Kainit,	Daniel Webster, Muney,	2.10	------	------

†Composite sample.

FERTILIZERS.

Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
	Total		Available.				Total						
Insoluble.	Found.	Guaranteed.	Found.	Guaranteed	Present as muriate.	Present as sulfate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
-------	-------	-------	-------	-------	-------	-------	49.22	49.00	-------	-------	52.18	45.00	1304
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.70	15.00	64.17	60.00	810
-------	8.74	2.24	-------	-------	-------	-------	†	-------	*1.55	2.30	15.00	14.00	288
-------	-------	-------	-------	-------	-------	-------	*11.16	12.00	-------	-------	13.38	15.00	856
-------	-------	-------	-------	-------	-------	-------	52.09	48.00	-------	-------	55.15	50.00	430
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.72	14.76	64.17	55.00	845
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.58	15.23	63.78	55.00	1520
-------	-------	-------	-------	-------	-------	-------	14.06	12.00	-------	-------	16.33	13.00	705
-------	-------	-------	-------	-------	-------	-------	13.62	12.00	-------	-------	15.87	14.00	1324
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.62	14.00	63.78	55.00	1335
-------	-------	-------	-------	-------	-------	-------	13.53	12.00	-------	-------	15.82	16.00	1451
-------	.74	-------	-------	-------	6.42	-------	6.42	4.00	*1.51	2.50	17.77	24.00	1186
-------	.51	-------	-------	-------	5.30	-------	5.30	5.00	*8.27	9.05	47.55	47.00	924
-------	-------	-------	-------	-------	-------	-------	*11.65	12.00	-------	-------	13.88	11.50	383

*Constituent falls below guaranty.
†Tankage is quoted without regard to potash. In this case .70 per cent. is guaranteed and .78 per cent. found.